A COMPARISON OF STANDARD HOME MORTGAGE WITH VARIABLE INTEREST RATE AND DEFERRED PAYMENT MORTGAGES

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PREFACE

This study has been conducted in order to better understand the cost of financing the purchase of a home since the cost of financing is the largest component of the total cost of home ownership. It is hoped that this study will be of value to those seeking to buy a home, especially the younger homebuyer.

I wish to thank the following people for their invaluable aid in the preparation of this study. Without their aid and support this study could not have been undertaken. These individuals will long be remembered for their assistance.

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CHAPTER I

INTRODUCTION

Home ownership is an important goal toward which most American families work. Accumulating sufficient capital to purchase a home is difficult even when the desire for ownership is great.

> Housing represents the largest single fraction of most family budgets. As a consequence, both homebuyers and owners of rental units usually make their purchases on credit, characteristically through a loan secured by a mortgage on the property (Kaiser, 1968, p. 116).

The cost of housing in the United States increased 42 percent between 1972 and 1975 (Breckenfeld, 1976) and by an additional 12 percent by August 1976 (U.S. News and World Report, August 30, 1976). This rapid increase in the cost of housing has caused many homebuyers to delay the purchase of a new home. This increase in the cost of housing has led to the search for new approaches to low cost housing (Architectural Record, December, 1975). These new approaches include remodeling existent structures and the increased use of "mobile homes" (Breckenfeld, 1976). In purchasing homes, families are seeking ways in which they can reduce the initial cost of the house and finance the house at a rate which will be of greatest benefit to the family. The interest paid on a long-term loan is the most expensive component in the cost of housing today. Over 85 percent of all families who buy a house must finance it by a mortgage (Lerner, 1974). Even with the use of long-term financing, it is becoming increasingly difficult for the low and lower-middle class American to own his or her own new home. According to Breckenfeld (1976), 25 years ago seven out of 10 American families could afford to buy an average new home. However, today only four out of 10 families can afford to buy a new home.

Statement of Problem

Many families have only minimal skills in financial areas and find it difficult to comprehend the intricacies involved in a mortgage instrument. The amortized mortgage is the most frequently used in current practice and has become the acceptable mortgage form. Most home purchasers are reasonably comfortable with this type of obligation.

Recently several new types of mortgages have been proposed--including the variable rate mortgage and the deferred payment mortgage. It is possible that families who are purchasing homes might be misled by these new mortgage forms and fail to adequately evaluate the advantages and disadvantages of each type and the effect that each mortgage type has on the final cost of the home.

Purpose of the Study

The purposes of this study were:

(1) to review the history of mortgage lending in the United States,

(2) to identify the sources of mortgage money,

(3) to discuss the secondary mortgage market, and

(4) to analyze the advantages and disadvantages of the variable interest rate mortgage and the deferred payment mortgage as compared to the familiar long-term amortized mortgage.

Definition of Terms

Housing: The whole complex of activities, satisfactions, rights, obligations, convenience, and expectations surrounding the use of a particular dwelling unit by a particular household (Smith, 1970).

Housing Costs: The total dollar amount related to the purchase of a dwelling, including construction, land costs, and finance charges (*Report of the Presdient's Committee on Urban Housing*, vol. II, 1968).

Construction Costs: All expenses related to the building of a house (*Dodge Constructions Systems Costs*, 1965).

Mortgage: A pledge of property made to secure payment of a debt (Beyer, 1965, p. 582).

Amortized Mortgage: One that is repaid in specified amounts, frequently on a monthly basis, during the term of the mortgage (Beyer, 1965, p. 579).

FHA-Insured Mortgage: Mortgage on which principal and interest are insured for the lending institution by the Federal Housing Administration (Beyer, 1965, p. 581).

V.A. Mortgage: A mortgage on which a part of the principal and interest is guaranteed by the Veteran's Administration (Beyer, 1965, p. 582).

Conventional Mortgage: Any mortgage not insured by the Federal Housing Authority or guaranteed by the Veteran's Administration (Beyer, 1965, p. 580).

Primary Lenders: Mortgage lenders who directly supply funds to borrowers (Beyer, 1965, p. 583).

Secondary Mortgage Market: Financial institutions or non-institutional individuals or groups who purchase mortgages from primary-market lenders (Beyer, 1965).

Level-Payment Mortgage: One that provides for the payment of a like sum at periodic intervals during its term (Bryant, 1956, p. 358).

Mortgage Portfolio: The aggregate of mortgage loans held by the lender (Bryant, 1956, p. 359).

Term: The period or duration of a mortgage (Bryant, 1965).

Methodology

The data for purposes one through three were obtained from reviewing pertinent literature in the field. Objective four was accomplished by collecting information about new proposed mortgage forms from current literature and by discussion with officers of savings and loan institutions. The comparison of the cost of three mortgage forms was accomplished by writing computer programs and analyzing comparative interest costs.

CHAPTER II

HISTORY OF THE MORTGAGE MARKET

The history of the mortgage market will be traced from the 1920's to the present. These dates have been chosen because it was in the early 30's that the basic policy under which the present system operates was founded.

Prior to the 1930's the most popular mortgage used was a straight-term mortgage, known today as a short-term note or mortgage (Beyer, 1965). The essence of this mortgage was an annual interest payment with the principle to be paid when the mortgage came due for payment. Other characteristics of this mortgage included a 30 to 50 percent down payment and a high interest rate--up to 10 percent per year.

In the early 1930's, as a result of a severe depression, many of the straight term mortgages were foreclosed. These foreclosures were necessary because the mortgagors could neither pay the interest due nor the principle of their mortgages when they came due. The home buyers couldn't find work because of the depressed economy.

It was at this point that the Federal Government entered the mortgage business on a large scale. The Federal Government had participated in the investigation of slums and in construction of some defense housing during World War I, but it was not until the 1930's that the government entered the housing field on a sustained basis.

It was during the 1930's that the amortized mortgage became the prevalent type mortgage used to provide the necessary capital for the building and purchasing of single resident dwelling in the United States for approximately 50 years. This type of mortgage allows a long repayment period, low interest rate, and a low down payment. The original period of the mortgage was 20 years; however, this period has been gradually increased. The interest rate in 1934 was originally 5.0 percent (Beyer, 1965), but increased to 9 percent in recent years. The current down payment is also less than that required in the 1920's for the straight term mortgage. The result of the depression of the late 1920's and early 1930's was a great change in the practices related to the purchase of a home (Bryant, 1956). The result of the lessons learned from the depression of the 1930's has been the introduction of many improvements in the mortgage lending business. These improvements have been very valuable, both to the lender and the borrower.

On July 22, 1932 the Federal Home Loan Bank Act was approved. This act resulted in the creation of the Federal Home Loan Bank System (FHLBS) (Bryant, 1956). The FHLB System provided a credit reserve for institutions which were eligible for memberships in the system. The FHLBS provided a central credit facility supplement to the financial resources of the institutions which were members. This system and its operation will be considered in detail in Chapter III of this paper. Those eligible included savings and loans, building and loans, homestead associations and insurance companies. This system provided some relief to the lending institutions; however, this relief was not always passed on to the borrower by the lending institution.

Following the election and inauguration of Franklin D. Roosevelt as president of the United States a number of important laws were passed to relieve the plight of the borrower as well as to protect the interests of the lender (Bryant, 1956). One of the first was created in 1933, the year of Mr. Roosevelt's inauguration. This was called the Home Owner's Loan Corporation (HOLC). The HOLC provided for the refinancing of the homes of many hard-pressed home owners. The new mortgage provided low interest rates and a long repayment period. The HOLC also provided relief to many lending institutions because it allowed the refinancing of many mortgages which had been frozen with the closing of the banks and other lending institutions in 1933. The HOLC thus saved many of the lending institutions from bankruptcy. The HOLC discontinued its refinancing procedures in late 1936.

The most important and far reaching change in the method of financing a home occurred in 1934 when the National Housing Act (NHA) was passed by the Congress of the United States (Bryant, 1956). The NHA created the Federal Housing Administration (FHA) in 1934. The FHA and its practices were not accepted immediately by many of the lending institutions. The reasons for non-acceptance were many and varied, but included were fear of the Federal control and disagreement with FHA policies of loan insurance. However, in time, the lending institutions gradually accepted the Federal role in the home mortgage market and began to support the policies of the FHA. According to Bryant (1956), the policies of the FHA resulted in the following benefits for the borrower: (1) a mortgage of long term with a low down payment, (2) reduced financing costs by eliminating frequent loan renewal of short term loans, (3) allowed the buyer to budget his income for housing with a fixed monthly payment which includes, in addition to principal repayment, the costs of tax, interest, insurance, (4) more care was taken in the amount they would be allowed to borrow, and (5) the development of construction standards. From the lender's point of view several benefits are also available through FHA loans according to Bryant (1956). They include the following: (1) the mortgages were more liquid as they were easily marketable, (2) the lenders could finance a large percentage of the cost of the home, and (3) the FHA insurance allowed banks to consider home loans as a nonrisk asset.

The Reconstruction Finance Mortgage Company was established in 1935 as a subdivision of the Reconstruction Finance Corporation (RFC) which was established in 1932. In 1938 the Federal National Mortgage Association (FNMA) was organized by the RFC to replace the Reconstruction Finance Mortgage Company. The FNMA, known as Fanny May, was a standby agency which was to provide aid in times of emergency. Thus, the FNMA became a secondary market. According to Bryant (1956), at various times the FNMA has purchased Veteran's Administration (VA) and FHA loans at above market value and thus sustained these programs.

In 1949 the Congress of the United States passed the Servicemen's Readjustment Act which provides for guaranteed mortgage loans to veterans. These loans are popularly known as "GI Loans" or "VA Loans" as reported by Beyer (1965). The VA loans allowed former veterans to purchase homes on very liberal terms. Beyer (1965) also reports that by using a combination of FHA and VA loans a veteran could finance 100 percent of the cost of a home. There are some similarities and some differences in the FHA and VA programs of the Federal government. According to Beyer (1965), the number of VA loans have declined significantly since 1956. The VA loans peaked in 1955 when 30 percent of all new homes were financed by the VA.

In 1949 one of the most significant housing acts of recent years was passed by the United States Congress. Beyer (1965) states that three broad conclusions are to be drawn from the Housing Act of 1949: (1) the acknowledgment that a housing problem exists, (2) the Congress feels a social responsibility to address the problem, and (3) that one of the functions of the national government is to attack the problem. Even though the problem was to be of concern to the national government, the method of attacking the problem was the harnessing of private enterprises. The private sector of the economy was called upon to meet the housing need of the country; however, the Federal Government was to provide assistance and encouragement. The Housing Act of 1949 clearly stated that if private enterprise should fail, the government would then attack the problem of housing (Beyer, 1965).

The Federal Housing Act of 1949 summarized the housing practices that had developed since 1934 (Beyer, 1965). At this time the Congress of the United States also formulated a National Housing Policy. In this National Policy the Congress recognized that the well-being of the American people depended upon and required a national housing production and that was the responsibility of private enterprise with the government giving aid and guidance when necessary.

The Housing Act of 1949 and 1950 made important changes in the government activities related to the construction of housing (Bryant, 1959). Some of these changes were listed in Bryant (1956, p. 14) and are as follows:

(1) Appropriated funds to enable the FNMA to buy at par V. A. and FHA loans.

(2) Approved a plan by FHA to yield insurance guaranteeing 2-3/4 percent net to investors in rental housing.

(3) Granted permission to construct 810,000 public housing units and authorized loans and grants for slum clearance.

(4) Further liberalized the terms of FHA loans.

These changes and others made during the tenure of the 50's tended to extend the authority of the FHA and to change the provision of the FHA code to provide for (<u>FHA Story</u>, 1959): (1) Better military housing (Capehart Act, 1955), (2) Reduced minimum down payment in 1952 and 1958, (3) Housing for the elderly (1956), (4) Set minimum property standards (1958), and (5) in 1959 the FHA paid special attention to the problems of minority groups, older people, families who have a limited amount of money, and special interest groups.

Until the latter part of the 1960's the two primary functions of the FHA were (1) to support the public housing programs, and (2) to protect private lenders against losses on loans. With the Housing and Urban Development Act of 1968 the Federal Government entered a new phase of participation in housing and residential finance. This act created two programs unknown before. These were subsidy programs which provided for the government to pay a portion of loan interest so as to reduce the cost of housing to those families who should qualify. In 1973 the programs were halted and after improving the management procedures some programs were re-introduced in 1975.

To understand the function of the FHA one should understand that the FHA does not make loans nor does it construct new houses. Its sole function until the Housing Act of 1958 was to insure loans granted by private lenders. The majority of FHA activities were conducted under Section 203 of the Housing Act of 1934. Other specialized programs were generated for FHA as the need became apparent. Table I gives the interest rate ceiling for FHA loans from November, 1934 to September, 1975.

The FHA insured loans are among the most secure investments available in the mortgage market. This security is paid for by the borrower, since he pays mortgage fees of 0.5 percent insurance premium. Thus, the effective interest rate on FHA home mortgages is 0.5 percent above

TABLE I

INTEREST RATE CEILING FOR FHA LOANS
FROM 1934-1975

Effective Date	Rate* Percent
November 27, 1934	5
August 1, 1939	41/2
April 24, 1950	4-1/4
May 2, 1953	4-1/2
December 4, 1956	5
August 6, 1957	5-1/4
September 24, 1959	5-3/4
February 2, 1961	5-1/2
May 29, 1961	5-1/4
February 7, 1966	5-1/2
April 2, 1966	5-3/4
October 3, 1966	6
May 7, 1968	6-3/4
January 24, 1969	7-1/2
January 5, 1970	8-1/2
December 1, 1970	8
January 12, 1971	7-1/2
February 18, 1971	7
August 10, 1973	7-3/4
August 25, 1973	8-1/2
January 21, 1974	8-1/4
April 15, 1974	8-1/2
May 13, 1974	8-3/4
July 8, 1974	9
August 14, 1974	9-1/2
November 25, 1974	9
January 21, 1975	8-1/2
March 3, 1975	8
April 28, 1975	8-1/2
September 2, 1975	9

*Does not include premium charges.

Source: Savings and Loan Fact Book, 1976, p. 111.

those stated in Table I. Several factors such as delays, insurance payments, etc., have resulted in a decline in the use of FHA home loans during the last several years.

CHAPTER III

SOURCES FOR MORTGAGE MONEY

The largest single source of mortgage money today is the savings institutions (see Table II). These are the largest pool of the nation's personal savings (McMichael, 1967). The four leading lenders in 1972 who accounted for 87 percent of the outstanding mortgage loans on one-to-four family homes are as follows (Housing in the Seventies, 1974):

(1) Savings and Loan Associations, 49.7 percent.

(2) Mutual Savings Banks, 14.7 percent.

(3) Commercial Banks, 15.8 percent.

(4) Life Insurance Companies, 6.6 percent.

The remainder of the mortgage market (13 percent) is provided by a varied group of lenders. These include Federal Credit Agencies (7.8 percent), GNMA pools, and Farmers Home Blocks of loans (3.1 percent). The remaining 2.1 percent of the mortgage market for private homes is provided by a variety of other groups, such as the following (McMichael, 1967): trust companies, mortgage investment companies, title companies, and individuals.

TABLE II

OVER-THE-COUNTER SAVINGS (BILLIONS OF DOLLARS)

Year End	Saving Associations[1]	Mutual Savings Banks[2]	Commercial Banks[3]	Credit Unions[4]	Postal Savings	Total
1950	$ 14.0	$ 20.0	$ 34.9	$ 0.9	$2.9	$ 72.7
1955	32.1	28.2	46.0	2.4	1.9	110.6
1960	62.1	36.3	67.1	5.0	0.8	171.3
1965	110.4	52.4	130.8	9.2	0.3	303.1
1966	114.0	55.0	142.9	10.0	0.1	322.0
1967	124.5	60.1	163.4	11.2	+	359.2
1968	131.6	64.5	181.3	12.3	...	389.7
1969	135.5	67.0	177.0	13.7	...	393.2
1970	146.4	71.6	205.8	15.4	...	439.2
1971	174.2	81.4	239.2	18.3	...	513.1
1972	206.8	91.6	273.5	21.7	...	593.6
1973	227.0	96.5	314.4	24.6	...	662.5
1974	243.0	98.7	360.7	27.5	...	729.9
1975*	286.0	109.8	386.1	33.0	...	814.9

*Preliminary.

+Less than $50 million.

[1] All types of savings.

[2] Regular and special savings accounts.

[3] Time and savings deposits of individuals, partnership, and corporation.

[4] Shares and member's deposits.

Source: Savings and Loan Fact Book, 1976, p. 14.

The four major lending institutions will be considered here. Government agencies who are involved in secondary mortgage markets will be considered in Chapter IV of this report. The remaining group of lenders will not be considered, since they contribute only 2.1 percent of the lending market and are too diverse.

Savings and Loan Associations (SLA)

There are three types of savings and loans associations and are listed as follows (Denton, 1961):

(1) Mutual SLA, which is federally chartered. These provide insurance on deposits through the Federal Savings and Loan Insurance Corporation (FSLIC) and are owned and controlled by the depositors.

(2) State chartered SLA's, which provide FSLIC insurance and are owned by stockholders.

(3) State chartered SLA's, which do not provide FSLIC insurance. These companies have declined because most depositors prefer FSLIC insurance.

The SLA's are private companies which are controlled either by federal or state regulatory agencies. However, the general policy governing the day-to-day operation is controlled by the directors of each individual SLA. Sixty-three and six tenths million individuals save in SLA in the United States; the average savings is $3,819 (Savings and Loan Fact Book, 1976). These resources are used by 12.9 million borrowers who each have an average loan of $19,308 (Savings and Loan Fact Book, 1976). The SLA acts as an intermediate between the saver and the borrower. The savers pool their savings in the SLA and in return the savers are paid interest on their savings. The SLA loans the saver's money to borrowers.

The SLA represents the largest lenders in the mortgage market. The SLA's provided 55 percent of the mortgage monies made available for home mortgages in 1972 (Housing in the Seventies, 1974). The SLA's invest the major portion of their assets in the private home mortgages. This investment amounted to about 75 percent of their assets (Housing in the Seventies, 1974). The remaining 25 percent of the SLA assets are invested in a variety of loans generally related to land and building development.

The SLA's make two types of loans: (1) conventional and (2) FHA and VA. The conventional loans are the loans made to individuals without FHA or VA insurance. The conventional loan does not provide the lender with protection in case the borrower must be foreclosed because of inability to pay. The FHA and VA mortgages afford insurance protection for the lender. The SLA's are organized using two basic organizational forms: mutual and stock companies. The mutual companies are owned by the depositors in the SLA. On the other hand, the stock SLA's are owned and operated much as any other privately owned company. Most of the SLA's are mutual institutions

(Housing in the Seventies, 1964). As indicated earlier, an SLA may either be federally or state chartered. They differ somewhat in the legal and regulatory conditions of the charter. The SLA's which are federally chartered are required to hold membership in both the Federal Home Loan Bank System (FHLBS) and the FSLIC (Housing in the Seventies, 1974). The SLA's that are federally chartered are also required to operate within the framework of the state laws in the locality in which they are chartered.

The FHLBS places the following requirement on the federally chartered SLA's: (1) sound mortgage loan policies, (2) minimum assets must be invested either in cash or United States Government securities, (3) limitation on mortgage loans, and (4) a ceiling on deposit rates (Housing in the Seventies, 1974).

All federally chartered SLA's are required by law to carry FSLIC insurance. Some of the state chartered SLA'S do not carry FSLIC insurance. However, those SLA's which do carry FSLIC insurance are regulated in the same manner as the SLA's which are federally chartered. Some states have established insurance agencies similar to FSLIC to provide an alternative method of deposit insurance to protect the depositor. The total savings in SLA in 1975 was 286 billion dollars, according to Table II. Of this total, 225.3 billion dollars was invested in one-to-four family housing units (see Table III).

TABLE III

MORTGAGE LOAN OUTSTANDING BY TYPE OF LENDER AND TYPE OF PROPERTY, YEAR-END 1975 (DOLLAR AMOUNTS IN BILLIONS)

Lender	Residential Properties: One to Four Family	Residential Properties: Multi-Family	Residential Properties: Total	Commercial Properties	Farm Properties	Total Mortgage Loans
Savings and Loan Associations	$225.3	$25.4	$250.7	$ 28.0	+	$278.7
Commercial Banks	76.6	6.6	83.2	45.5	$ 6.4	135.1
Mutual Savings Banks	45.9	17.7	63.6	13.3	0.1	77.1
Life Insurance Companies	17.7	19.8	37.5	45.0	6.7	89.1
All Others	79.7	26.1	105.8	18.8	35.6	160.3
Total	$445.2	$95.6	$540.8	$150.6	$48.8	$740.3

+Less than $50 million.

Source: Savings and Loan Fact Book, 1976, p. 29.

Mutual Savings Banks (MSB)

Mutual savings banks are not widely distributed in the United States. They are to be found mainly in the Northeastern section of the United States, with their greatest concentration in New York, Connecticut, and Massachusetts (McMichael, 1967, p. 42). The MSB are all state chartered and are thus unlike the SLA's which may be either federally or state chartered. The MSB are controlled by trustees who are responsible for the protection and investment of the funds deposited in the MSB. The difference between operating expense and income on the loans made is divided among the depositors. The MSB vary in size as do the SLA's. Some have assets of a few hundred thousand while some exceed one billion dollars.

The first MSB's were founded in 1816 (McMichael, 1969). The number of MSB's increased until about 1900, after which they declined. However, since 1900 the assets have increased greatly. From 1950 to 1975 the assets of the MSB's increased from 20 to 109.8 billion dollars (see Table II), The SMB's are primarily home mortgage lenders. Because the MSB's are state controlled, the banks generally have fewer restrictions. Therefore, their investment policies are more flexible. In the Tax Reform Act of 1969, preferential tax treatment was given to income earned from mortgage investments (<u>Housing in the Seventies</u>, 1974). This tax relief has been one factor in a 60 percent increase in the savings in MSB's since 1969 (see Table II). The MSB's were the largest holders of VA and FHA home mortgages, with 25 percent of the federally insured mortgages in 1971 (Housing in the Seventies, 1974, p. 20).

Commercial Banks (CB)

From the four major sources of money for the housing mortgage market, the commercial banks are the most complex. The commercial banking system has as its primary function the lending of money. From the primary function two correllary functions have evolved (McMichael, 1967, p. 48): (1) the receiving of deposits and (2) the transferring of money and credit.

The commercial banks are run and controlled much as any other private business corporation. The CB's are controlled by a board of directors who operate the CB's for the stockholders.

The commercial banks have two types of deposits: (1) demand deposits and (2) time deposits. The demand deposits form the largest amount of deposits. These deposits are from the bulk of the working capital of individuals, corporations and partnerships.

About one-third of the deposits in CB's are in the form of time deposits (McMichael, 1967, p. 48). The CB's control to a limited extent the right of depositors to withdraw the time deposits placed with the bank. In recent years the activity of CB's in the home mortgage market has increased (Savings and Loan Fact Book, 1976). This is due to the growth of resources available for long-term mortgages. The increase is the result of increases in the time deposits, certificates of deposit, and the availability of trust funds (Housing in the Seventies, 1974).

The commercial banks control the largest assets in the United States (Savings and Loan Fact Book, 1976, p. 46). Their assets in 1975 were 958.4 billion dollars (see Table IV). This represents 44.7 percent of the available assets in the United States. However, they provided 76.6 billion dollars for home mortgages, or 17.2 percent of the total home mortgage monies. In 1950 the commercial banks controlled 56.7 percent of the assets in the United States and provided only 9.5 percent of the home mortgage market monies (Savings and Loan Fact Book, 1976). The greater activity in the home mortgage market is possibly due to their greater value of money and the fact that through the use of trust funds and certificates of deposits, less liquid conditions are created to be met by the banks.

TABLE IV

TOTAL ASSETS OF FINANCING INTERMEDIARIES AT YEAR-END
(BILLION OF DOLLARS)

Financial Intermediary	1950	1955	1960	1965	1970	1975
Commercial Banks	$168.9	$210.7	$257.6	$377.3	$576.2	$958.4
Savings & Loan Associations	16.9	37.7	71.5	129.6	176.2	338.4
Life Insurance Companies	64.0	90.4	119.6	158.9	207.3	289.1
Mutual Savings Bank	22.4	31.3	40.6	58.2	79.0	121.0
Finance Companies	9.3	18.3	26.9	44.8	62.5	92.5
Investment Companies	3.3	7.8	17.0	35.2	47.6	42.2
Credit Unions	1.0	2.7	5.7	10.6	17.8	38.3
Private Pension Funds	6.7	18.3	38.2	73.6	110.8	156.5
State & Local Pension Funds	4.9	10.8	19.6	33.2	58.1	106.4
Total	$297.4	$428.0	$596.7	$921.4	$1335.5	$2142.8

Source: Savings and Loan Fact Book, 1976, p. 46.

Life Insurance Companies (LIC)

Of the total home mortgage market, the LIC's contribute only four percent of the total mortgage market. This is a decrease from 13.9 percent of the mortgage market in 1965 (Savings and Loan Fact Book, 1976). Even though the percentage of the loan market carried by the LIC's is low, the LIC's provide a very important function to the home mortgage market. This function is an indirect one; that is, the LIC's provide large sums of money for other long-term mortgages which would otherwise have to compete with the home mortgage markets.

All life insurance companies are charted and regulated by states. As a result, regulations are usually less severe than federally regulated loan agencies.

CHAPTER IV

SECONDARY MORTGAGE MARKET

Since the 1930's the government of the United States has established a number of institutions whose purpose was to increase the ability of the lending institutions to convert its assets into cash. With the depression of the 1930's many of the lending institutions were forced to foreclose on a very large number of mortgaged properties. The result was that the lending institutions were forced to carry a great deal of frozen assets (Savings and Loan Fact Book, 1976). The government agencies were established to avoid the problems faced by lending institutions in periods when they could not convert their assets into cash. The following institutions have been established by the Federal Government to lend direct support to selected types of mortgages (Housing in the Seventies, 1974).

(1) Federal Home Loan Bank System, July, 1932.

(2) Federal National Mortgage Association, 1938.

(3) Government National Mortgage Association, 1968.

(4) Federal Home Loan Mortgage Corporation, 1970.

These government agencies support the home mortgage market to the extent of about 12.8 percent of the total home mortgage market. Table V gives a summary of the support given to the home mortgage market since 1950.

Federal Home Loan Bank System (FHLB)

The FHLB was created by congress in 1932 to be a permanent fixture in the nation's home mortgage market. Its primary purpose was to provide a central credit facility to supply resources for its member institutions. The FHLB served as a source of secondary money to meet its members' heavy withdrawal demands. It channels money from areas of surplus money into areas which have a deficiency of money. It is in this way that the FHLB provides an important activity to the home mortgage market.

The FHLB function may be illustrated by referring to Table V. In 1959 the FHLB advanced $4,030 billion into the home mortgage market. This amounted to about 20 percent of the total. In subsequent years the FHLB has been even more active in the home mortgage market. The FHLB extends credit to its mortgage-lending member institutions in the form of advances (Housing in the Seventies, 1974). The advances are loans of funds secured by mortgages.

The FHLB provides two major types of advances: (1) short-term advances, these are usually made for a period of 12 months and are intended to supply funds for

TABLE V

ANNUAL CHANGE IN AGENCY-SUPPORTED RESIDENTIAL DEPARTMENT
(DOLLAR AMOUNTS IN MILLIONS)

Year	FNMA & GNMA Holdings	FHLMC Holdings	FHLB Advances	Total Agency Support	All Residential Debt	Agency Support as a Percentage of Total
1950	$ 519	$	$ 383	$ 902	$ 9,100	9.9
1955	180		549	729	13,400	5.4
1960	759		153	606	12,100	5.0
1965	42		672	630	19,000	3.3
1966	2,232		938	3,170	13,900	22.8
1967	1,807		2,549	742	16,000	4.6
1968	2,517		843	3,390	18,600	18.2
1969	4,378		4,030	8,408	20,400	41.2
1970	4,911	325	1,326	6,562	19,200	34.2
1971	2,395	643	2,679	359	36,400	1.0
1972	1,801	820	43	2,664	47,500	5.6
1973	3,300	8.6	7,168	11,284	48,000	23.5
1974	6,222	1,982	6,657	14,861	33,400	44.5
1975	4,838	385	3,959	1,264	37,400	3.4

Source: Savings and Loan Fact Book, 1976, p. 34.

periods of heavy withdrawal from the lending institutions; and (2) long-term advances, these advances are usually made for a 10 year period. The funds advanced by the FHLB are from the following sources (Housing in the Seventies, 1974).

(1) Sale of FHLB stock to member institutions.

(2) Earnings retained by the banks.

(3) Deposits of member institutions.

(4) Sale of consolidated obligations.

The FHLB's also supervise the FSLIC.

Federal National Mortgage Association (FNMA)

The FNMA was established in 1938 by the FHA to provide a secondary mortgage market to support the new FHA mortgages. During its first several years of operation, the FNMA bought FHA mortgages when mortgage money was scarce and sold the mortgages when wartime conditions supplied a surplus of mortgage monies. In 1948 the FNMA was authorized to buy VA loans also and in 1970 the FNMA was given authority to purchase conventional mortgages. The FNMA has served the nation's housing programs in a number of ways by using its resources. The source of funds available to FNMA are:

(1) Mortgage repayments.

(2) Sale of debentures, notes, and other obligations.

(3) Commitment fee.

(4) Money from the sale of mortgages.

(5) The difference between borrowed money and loaned money (Housing in the Seventies, 1974).

The HUD (Housing and Urban Development) Act of 1968 divided the old FNMA into two new corporations: (1) the new FNMA which is privately owned (but sponsored by the Federal Government). The new FNMA retains its secondary market function, and (2) the Government National Mortgage Association.

Government National Mortgage Association (GNMA)

The GNMA was formed with the reorganization of FNMA in 1968. The GNMA is owned by the Federal Government and was integrated as a part of HUD. The purpose for the establishment of GNMA was to carry on secondary mortgage market activities not possible by private enterprise which may be closely regulated by the Federal Government. GNMA was organized to support the primary mortgage markets and administers three types of programs:

(1) the guarantee of securities based on government-backed mortgages;

(2) assistance to certain types of housing and to the mortgage and housing markets during periods of tight credit through the purchase of mortgages, and

(3) management of a portfolio of mortgages owned by various agencies of the Federal Government (1975 Annual Report of HUD). These functions will be discussed next.

(1) Government Function

GNMA guarantees securities backed by government-insured or guaranteed mortgage. The GNMA guarantees the prompt payment of the interest and principal on notes which are issued by home mortgage institutions. This guarantee has effectively expanded the capital available to the housing mortgage market. This has been accomplished because such guarantees have attracted mortgage monies from pension funds and retirement funds, union funds, and funds from non-mortgage oriented institutions that would otherwise be unavailable. There are two types of mortgage backed securities. (1) The "pass-through" type which provides for the monthly payment to the security holders. (2) The "modified pass-through" security guarantees these monthly payments to the holder regardless of whether or not they are collected from mortgages (1975 Annual Report of HUD).

(2) Special Assistance Function

The special assistance function of GNMA plays a unique role in the interest rate risk area of mortgage lending. Mortgages usually have a fixed rate of return. When interest rates on the open market rise, mortgages sell at a discount. GNMA acts to absorb some of this discount under its Tandem Program with FNMA (see Table VI).

The Tandem Program is so named because GNMA and FNMA act together to purchase the loans financed at less than the interest rates on the open market. GNMA purchases the loans at a fixed price. The mortgages are then sold to FNMA at the interest rate of the open market. The discount is absorbed by both GNMA and FNMA (Housing in the Seventies, 1974).

TABLE VI

GNMA PORTFOLIO BY FUNCTION
(MILLIONS OF DOLLARS)

Year End	Special Assistance Function	Management & Liquidation Function	Total Loan Portfolio
1965	$1,340	$ 953	$2,293
1966	1,470	1,269	2,739
1967	1.742	1,668	3,410
1968	2,303	1,970	4,273
1969	2,937	1,928	4,865
1970	3,401	1,821	5,222
1971	3,648	1,673	5,321
1972	3,824	1,287	5,111
1973	3,576	469	4,045
1974	4,440	409	4,849
1975	6,884	358	7,242

Source: Savings and Loan Fact Book, 1976, p. 116.

(3) Management and Liquidation Function

GNMA is responsible for the management of a variety of mortgages and assets acquired from FNMA and from other government agencies. These assets act as security for issues of Participation Certificates which GNMA sells to the public.

Federal Home Loan Mortgage Corporation (FHLMC)

The Emergency Home Finance Act of 1970 created the FHLMC to act as a secondary mortgage market to increase the flow of money into the housing mortgage market. The FHLMC is under the control of the Federal Home Loan Bank Board.

In periods of low money availability the FHLMC increases the available money by purchasing mortgages from supervised lending institutions. The funds which FHLMC uses to purchase these mortgages are obtained from the following sources:

(1) borrowing from the Federal Home Loan Bank

(2) the insurance of GNMA mortgage-backed bonds

(3) the insurance of participation sale certificates

(4) direct sales from its mortgage portfolio (<u>Savings and Loan Fact Book</u>, 1976).

The FHLMC also provides a source of mortgages when the savings institutions have a large excess of savings. In such a case, the FHLMC will sell mortgages from its portfolio to the savings institutions, as was the case in 1975. Table VII shows the transactions of the FHLMC between 1970 and 1975.

TABLE VII

FEDERAL HOME LOAN MORTGAGE CORPORATION ACTIVITY
(MILLIONS OF DOLLARS)

	Mortgage Transactions		Loan Portfolio (Year-End)		
Year	Purchases	Sales	Total	FHA-VA	Conventional
1970	$ 325	$	$ 325	$ 325	$
1971	778	113	968	181	147
1972	1,297	407	1,798	1,502	286
1973	1,334	409	2,604	1,800	804
1974	2,190	53	4,586	1,961	2,025
1975	1,713	1,021	4,987	1,881	3,106

Source: Savings and Loan Fact Book, 1976, p. 114.

Although the FHLMC does buy conventional mortgages, the majority of FHLMC's purchases are FHA and VA loans. However, in 1973 the FHLMC purchased a greater volume of conventional loans than it did FHA and VA loans (see Table VII) (Savings and Loan Fact Book, 1976).

CHAPTER V

HOME MORTGAGE FORMS

Fully Amortized Form

Since the early 1930's the principle method used to finance homes has been the long term, fully amortized mortgage. This home mortgage is characterized by a fixed interest rate and equal monthly payments. This method of home mortgage, which is a direct reduction loan, was first espoused by the Federal Government through agencies which had their origin in the great depression of the 1930's. The chief support of the fully amortized loan was the Federal Housing Administration and the Federal Home Loan Board.

The fully amortized loan functioned well for a period of about thirty-five years. This was a period of relatively low inflation rates and stable interest rates. The FHA interest rate change during this period (see Table I) was from 5 percent in November, 1934 to 6 percent in October, 1966 (Savings and Loan Fact Book, 1976). From October, 1966 to September, 1975, the FHA interest rate increased by 50 percent to 9 percent.

The problems faced by the present home buyers are intensified by this rapid inflation in interest rates. Two problems are especially severe. First, in periods of interest inflation it is difficult for the borrowers to obtain a loan from a lender unless the borrower is willing to pay a premium interest rate. By charging the premium rate the lender protects himself or herself against interest inflation. Second, the monthly payments required of the borrower often exceed the ability of younger borrowers to manage. This is especially true since the inflation of the last few years has greatly increased the cost of housing in the United States (Housing in the Seventies, 1974).

Because of these two problems which have emerged in the last five years, problems which are related directly to the fully amortized mortgage loans, new mortgage forms have been proposed to solve the problems. There are many possible mortgage forms; however, only two new forms will be considered in this paper. These two new forms are: (1) Variable-Rate Mortgage, and (2) Deferred Payment Mortgage.

Variable-Rate Mortgage Form

The purpose of the variable-rate mortgage is to avoid being "locked into" a specific interest rate for 25 to 35 years. This problem affects both the lender and the borrower when interest inflation occurs. This mortgage form replaces the fixed interest rate of the direct reduction mortgage loan with a rate which varies according to changes which occur in the market interest rate. The borrower agrees, when he finances a home using this mortgage form, to allow the interest which he is required to pay to vary as the interest rate of mortgage money varies. By agreeing to this flexible interest rate the borrower avoids the paying of a fixed premium interest rate which would be required by the lender--an interest rate which may be projected on what the lender believes would be the market interest rate 10 or 20 years hence. The result of the borrower being forced to use a fixed interest rate mortgage would be the payment of a higher average interest rate than would be required by the use of a variable rate mortgage form (Housing in the Seventies, 1974).

When the variable interest rate mortgage is used, the borrower and lender agree in advance as to the manner in which the interest rate will vary (Housing in the Seventies, 1974). The agreement usually states that minor changes in the interest rate will be disregarded and that only major changes will affect the amount which the borrower will pay. The interest rate is generally tied to some agreeable index of reference.

In California there has been the acceptance of this mortgage form. Seven state chartered savings and loan associations and two commercial banks are using this mortgage form; they are regulated by the state, as indicated by the following (Federal Home Loan Bank Board Journal, 1976, p. 6):

> State-chartered savings and loan associations are required by law to implement index changes no more frequently than semiannually, use a weighted average cost of funds to savings and loan associations in California, and implement changes only if the index moves at least 10, but not more than 25 basic points. Decreases are mandatory, but increases are optional, finally there is an absolute ceiling of 250 basic points over the original contract rate.

The mortgage form provides protection for the lender when the problem of interest inflation occurs. However, it does not provide a stable payment plan for the borrower. Some safeguards against extreme variation in the borrower's monthly payment can be provided as is indicated by the regulations used by the State of California.

Deferred Payment Mortgage Form

The deferred payment mortgage form attempts to coordinate the monthly payments required of the borrower with his or her current and future income. It allows the purchaser to buy a house against expected future earnings. The rapid increase in the cost of housing in recent years has produced severe difficulty for the young purchaser of homes.

This mortgage form allows the borrower to repay only the interest due for the first few years of a home mortgage;

some forms allow a repayment plan in which not even all of the interest is paid during the first few years of the loan (Housing in the Seventies, 1974). Five basic deferred-payment plans have been approved by HUD to be eligible for FHA insurance (HUD News No. 76-366, 1976). These five plans vary the rate of payment increase and the period of the increase.

Table VIII outlines the five plans available. Mortgage payments are lower in the early years if (1) the rate of increase is greater or (2) the term of the loan is longer. A family which expects only average income increases would select the plan with a 10 year period of increase and a 3 percent rate of increase. Table IX compares the traditional mortgage repayment with a deferred payment repayment schedule.

TABLE VIII

APPROVED FHA PLANS FOR DEFERRED PAYMENT

Rate of Graduation	Term of Graduation
2-1/2 percent	5 years
5 percent	5 years
7-1/2 percent	5 years
2 percent	10 years
3 percent	10 years

[1]Rate of graduation is rate of increase in payment per year.
[2]Graduation: the period during which yearly increases occur.
Source: HUD News No. 76-366, 1976.

TABLE IX

COMPARISON OF PAYMENT SCHEDULES OF LEVEL PAYMENT MORTGAGE AND GMP*

$35,000 loan - 8-1/2% interest - 30 years term

Year	Regular Loan	GMP	Difference
1	269	223	-46
2	269	230	-39
3	269	237	-32
4	269	244	-25
5	269	251	-18
6	269	258	-11
7	269	266	- 3
8	269	274	5
9	269	282	13
10	269	291	22
11	269	300	31

*GMP - Graduate Mortgage Payment is the same as deferred payment.

Source: Hud News No. 76-366, 1976.

A young family who expects a faster than normal growth in income may wish to choose a higher rate of increase and a shorter term of increase.

CHAPTER VI

COMPARISON OF MORTGAGE FORMS AND CONCLUSION

Comparison of Mortgage Forms

The purpose of exploring mortgage forms was to determine which method of financing a home is most appropriate for the average American family and would make it possible for many families to achieve homeownership. With the current mortgage requirements, the price of the average new home today exceeds the abilities of most American families to pay. As stated by Secretary Harris of Housing and Urban Development, in a statement presented before a committee of the congress of the United States of America (February 24, 1977, p. 4):

> The cost of housing also burdens many American households: (1) 24 percent of homeowners (or 5 million) with mortgages had housing costs requiring more than 25 percent of their income, (2) an unprecedented 44.8 percent of renters (or 10.5 million) had rent income ratios of 25 percent or more, (3) in 1975, almost 60 percent of American families could not afford to buy the median priced new home.

The Americans hardest hit by the rapid increase in the cost of housing are the younger homebuyers. For the typical homebuyer, the monthly payment for a home costing $35,000 would be $269.00 per month, using the fully amortized mortgage with an interest rate of 8.5 percent for 30 years (see Table X and Appendix A). Such an expense does indeed place a new home beyond the capabilities of most young homebuyers.

In the following sections of this chapter, the advantages and disadvantages of each of the mortgage forms presented in Chapter V are discussed. In order to make comparisons of the total cost of interest and the term for each mortgage form, the author prepared a computer program, in Fortran, which calculated an amortization schedule for each mortgage form based on a $35,000 loan. It was then possible to compare the number of years required to amortize the mortgage and the total amount of interest paid over the entire term. The amortization schedules are presented in the Appendixes and a summary of the basic information on the three mortgage forms is shown in Table X.

Conventional Mortgage (Fully Amortized)

The advantages of the conventional mortgage form are as follows: (1) This mortgage provides the homebuyer with a stable monthly payment. It is therefore possible for the homebuyer to budget the basic cost of homeownership. (2) This mortgage form is the established mortgage

TABLE X

COMPARISON OF INTEREST COST AND THE TERM FOR SELECTED MORTGAGE FORMS

Mortgage Forms	Year of the Mortgage	Amount	Monthly Payment	Interest Rate Percent	Date of Employment	No. of Years	Total Interest Paid
Conventional	Jan. 1, '77	$35,000	$269	8-1/2	Dec. 1, 2007	30	$62,032.38
Variable	Jan. 1, '77	35,000	269	9 to 7	May 1, 2006	29	59,716.21
Deferred	Jan. 1, '77	35,000	233[2]	8-1/2	Feb. 1, 2015	38	95,643.95

[1]The interest rate changes every five years.

[2]The monthly payment for the first five years is $233 and for the next 10 years there is a three percent increase each year to a maximum of $308.68 per month after 15 years.

form which is widely accepted. It has been the "mainstay" of the mortgage market for approximately 40 years. The individual homebuyer generally feels secure with this type of mortgage.

There are four major disadvantages of this mortgage form. (1) The mortgage lenders must charge a high rate of interest for new mortgages. The higher interest rates are based on the expected increase in the cost of money on the mortgage money market to the lending institutions. When the lending institutions expect an average increase of two percent in the cost which they must pay for money over the period of the mortgage, they institution would increase the mortgage interest rate to the homebuyer by approximately one percent at the time that the mortgage is approved. This allows the lender some protection against inflation expected over the period of the mortgage and enables the lender to equalize income between existent lower interest mortgages and the new mortgages offered at a higher interest rate. The average interest rates should provide sufficient income to the lenders to allow them to compete in the mortgage money market. A mortgage which is 10 years old may be paying only six percent (see Table I) and the income based on that rate does not provide sufficient money for lending institutions to pay interest on savings deposits. The net effect is that interest paid by new borrowers subsidizes the existent low-interest mortgages. (2) High interest prices many young homebuyers out of the homebuyer's market. The young homebuyers who have substantial housing needs simply can not afford the purchase of a new home because their incomes will not support such high monthly payments. (3) The lending institutions are not able to pay competitive rates in order to attract savings which could be loaned at lower interest rates. (4) The borrower has to pay a premium rate on all new mortgages. This rate reflects the anticipated growth in the cost of money in the money market.

Variable-Rate Mortgage (VRM)

The advantages of the variable-rate mortgage are as follows: (1) This mortgage form allows the lending institutions to maintain deposit rates competitive with the rates paid by other institutions in the money market. New loans could begin at a lower rate of interest since the lender would be able to increase the rate in the future if competitive rates increased. The lender would not be "locked into" a specified rate for the entire 30 years of the mortgage. This would allow the lending institutions to stabilize the availability of credit at all times. (2) A significant advantage to the borrower is the possibility of starting the mortgage at a lower interest rate than would be required for the conventional fully amortized mortgage. (3) Another advantage for the borrower is the possibility of an interest rate decrease.

In such a case the cost of the monthly payment would decrease significantly. For example, a 30 year loan of $35,000 at 9.5 percent would require a monthly payment of approximately $294 per month. However, if the interest rate dropped to 8.5 percent, the monthly payment would be $269 per month, a decrease of $25. On a theoretical basis the variable rate mortgage should be less on an average than would be the fixed rate (see Table X and Appendix B).

The disadvantages of the variable-rate mortgage form are: (1) When the interest rate increases, the monthly payment would increase accordingly. Such an increase could place a substantial burden upon the homebuyer. (2) When the interest rate increased and payments increased it could result in increased default on home mortgages.

Deferred Payment (Graduated Payment) Mortgage

The fundamental advantage of the deferred payment mortgage is that it allows younger homebuyers with limited income to purchase a home by basing their ability to repay the loan upon their future income growth. Payments are less during the early years of the mortgage and then increase as the family income increases.

The disadvantages are: (1) If the income growth does not occur, the homebuyer may not be able to meet the increased payments. (2) During the early years of the mortgage the homebuyer pays only the interest (or in some cases not even all of the interest). Therefore, the risk taken by the lender is somewhat greater than in the case of the conventional loans, so the lender may require a higher downpayment. (3) Since payments during the early years are for interest only, the family is not building up any equity. (4) The total amount paid for interest during the term of the deferred payment mortgage is considerably greater than the amount paid for either of the other forms. Table X shows that the total interest paid during the term of the fully amortized mortgage was $62,032, and the interest for the variable-rate was $59,716. The interest rate was changed every five years in the variable rate computation. The initial rate was 9 percent, then it went to 8%, 8.5%, 7.5% and finished the last five years at 7 percent. The term was 30 years for the fully amortized mortgage and only 29 years for the variable rate, assuming that there would be a gradual reduction in the interest rate. Payments were $269 per month for both types of mortgage.

The deferred payment mortgage presented a very different set of figures. The interest rate was figured at a consistent 8.5 percent and the base amount of the loan was the same as the other amounts, $35,000. A reduction of the monthly payment to $233 per month meant that the initial payments would not even cover the cost of the interest on the principal amount. Thus, the unpaid interest was added to the principal each month for the first five years of the mortgage. For the next 10 years, the monthly payment increased by three percent each year until payments reached $308.68 per month. They remained at that level for the duration of the mortgage. The startling contrast appears between this and the other mortgage forms with respect to the length of the mortgage and the total interest paid. It takes eight to nine years longer to pay off the deferred payment mortgage and the total interest paid is $95,644. This means that it cost over $33,000 for the privilege of having reduced payments during the early years of the loan, and no equity is being built up during the first half of the mortgage term.

Conclusion

In conclusion, it appeared that the most desirable mortgage form was the variable-rate mortgage. This form offers the best solution to the lenders problem of maintaining adequate funds from depositors to support a vigorous homebuilding industry and at the same time offers some relief to the borrowers when interest rates decline. The conventional loan form does not offer either lender or borrower any relief in periods of interest inflation or deflation. The use of the deferred payment mortgage does offer the younger, lower income borrowers the ability to purchase a home by projecting to future earnings. However, the total cost of the deferred mortgage exceeds, by a considerable amount, the anticipated cost of either the conventional or the variable-rate mortgage.

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APPENDIXES

APPENDIX A

FULLY AMORTIZED MORTGAGE

```
// JOB

LOG DRIVE   CART SPEC   CART AVAIL  PHY DRIVE
  0000        1816         1816        0000

V2 M11   ACTUAL  8K  CONFIG  8K

// FOR
         *IOCS(CARD,1132 PRINTER)
         *LIST SOURCE PROGRAM


               READ(2,99)X,R,PA
            99 FORMAT(3(F10.3))
               WRITE(3,10)X,R,PA
            10 FORMAT(1X,3(F9.2,2X))
               WRITE(3,30)
            30 FORMAT(1X,'MONTH',2X,'DAY',1X,'YEAR',1X,'PAYMENT',2X,'INTEREST',2X
              1,'PRINCIPAL',2X,'BALANCE')
               TOT=0
               M=1
               MY=1977
               MD=1
             8 XINT=X*R/12
               IF(X-PA)11,12,12
            11 PA=X+XINT
               PR=X
               X=0.
               GO TO 13
            12 PR=PA-XINT
               X=X-PR
               TOT=TOT+XINT
            13 WRITE(3,20)M,MD,MY,PA,XINT,PR,X
            20 FORMAT(2X,I2,2X,I2,2X,I4,2X,F7.2,2X,F7.2,2X,F7.2,2X,F8.2)
               IF(X)6,6,9
             9 M=M+1
               IF(M-12)8,8,7
             7 M=1
               MY=MY+1
               WRITE(3,50)TOT
            50 FORMAT(10X,'INTEREST FOR YEAR',F9.2)
               GO TO 8
             6 WRITE(3,60)TOT
            60 FORMAT(10X,'INTEREST FOR YEAR',F9.2)
               MY=MY-1977
               WRITE(3,70)MY
            70 FORMAT(10X,'NUMBER OF YEARS IS ',I2,'.')
               CALL EXIT
               END

FEATURES SUPPORTED
 ONE WORD INTEGERS
 STANDARD PRECISION
 IOCS-
   1132 PRINTER
   CARD

CORE REQUIREMENTS FOR -
```

END OF SUCCESSFUL COMPILATION

// XEQ

35000.00 0.085 269.00

MONTH	DAY	YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
1	1	1977	269.00	247.91	21.08	34978.92
2	1	1977	269.00	247.76	21.23	34957.68
3	1	1977	269.00	247.61	21.38	34936.29
4	1	1977	269.00	247.46	21.53	34914.75
5	1	1977	269.00	247.31	21.68	34893.07
6	1	1977	269.00	247.15	21.84	34871.22
7	1	1977	269.00	247.00	21.99	34849.22
8	1	1977	269.00	246.84	22.15	34827.07
9	1	1977	269.00	246.69	22.30	34804.75
10	1	1977	269.00	246.53	22.46	34782.28
11	1	1977	269.00	246.37	22.62	34759.65
12	1	1977	269.00	246.21	22.78	34736.86
		INTEREST FOR YEAR 2964.90				
1	1	1978	269.00	246.05	22.94	34713.91
2	1	1978	269.00	245.89	23.10	34690.79
3	1	1978	269.00	245.72	23.27	34667.51
4	1	1978	269.00	245.56	23.43	34644.07
5	1	1978	269.00	245.39	23.60	34620.46
6	1	1978	269.00	245.22	23.77	34596.68
7	1	1978	269.00	245.05	23.94	34572.74
8	1	1978	269.00	244.89	24.10	34548.62
9	1	1978	269.00	244.71	24.28	34524.34
10	1	1978	269.00	244.54	24.45	34499.89
11	1	1978	269.00	244.37	24.62	34475.25
12	1	1978	269.00	244.19	24.80	34450.45
		INTEREST FOR YEAR 5906.54				
1	1	1979	269.00	244.02	24.97	34425.47
2	1	1979	269.00	243.84	25.15	34400.32
3	1	1979	269.00	243.66	25.33	34374.98
4	1	1979	269.00	243.48	25.51	34349.46
5	1	1979	269.00	243.30	25.69	34323.77
6	1	1979	269.00	243.12	25.87	34297.89
7	1	1979	269.00	242.94	26.05	34271.83
8	1	1979	269.00	242.75	26.24	34245.59
9	1	1979	269.00	242.57	26.42	34219.16
10	1	1979	269.00	242.38	26.61	34192.54
11	1	1979	269.00	242.19	26.80	34165.74
12	1	1979	269.00	242.00	26.99	34138.74
		INTEREST FOR YEAR 8822.86				
1	1	1980	269.00	241.81	27.18	34111.55
2	1	1980	269.00	241.62	27.37	34084.17
3	1	1980	269.00	241.42	27.57	34056.59
4	1	1980	269.00	241.23	27.76	34028.82
5	1	1980	269.00	241.03	27.96	34000.85
6	1	1980	269.00	240.83	28.16	33972.68
7	1	1980	269.00	240.63	28.36	33944.32
8	1	1980	269.00	240.43	28.56	33915.75
9	1	1980	269.00	240.23	28.76	33886.99
10	1	1980	269.00	240.03	28.96	33858.02
11	1	1980	269.00	239.82	29.17	33828.84
12	1	1980	269.00	239.62	29.37	33799.46

		INTEREST FOR YEAR 11711.62				
1	1	1981	269.00	239.41	29.58	33769.86
2	1	1981	269.00	239.20	29.79	33740.07
3	1	1981	269.00	238.99	30.00	33710.05
4	1	1981	269.00	238.77	30.22	33679.82
5	1	1981	269.00	238.56	30.43	33649.39
6	1	1981	269.00	238.34	30.65	33618.73
7	1	1981	269.00	238.13	30.86	33587.85
8	1	1981	269.00	237.91	31.08	33556.76
9	1	1981	269.00	237.69	31.30	33525.45
10	1	1981	269.00	237.47	31.52	33493.92
11	1	1981	269.00	237.24	31.75	33462.16
12	1	1981	269.00	237.02	31.97	33430.18
		INTEREST FOR YEAR 14570.40				
1	1	1982	269.00	236.79	32.20	33397.98
2	1	1982	269.00	236.56	32.43	33365.54
3	1	1982	269.00	236.33	32.66	33332.88
4	1	1982	269.00	236.10	32.89	33299.98
5	1	1982	269.00	235.87	33.12	33266.85
6	1	1982	269.00	235.64	33.35	33233.48
7	1	1982	269.00	235.40	33.59	33199.88
8	1	1982	269.00	235.16	33.83	33166.04
9	1	1982	269.00	234.92	34.07	33131.96
10	1	1982	269.00	234.68	34.31	33097.64
11	1	1982	269.00	234.44	34.55	33063.08
12	1	1982	269.00	234.19	34.80	33028.28
		INTEREST FOR YEAR 17396.53				
1	1	1983	269.00	233.95	35.04	32993.22
2	1	1983	269.00	233.70	35.29	32957.92
3	1	1983	269.00	233.45	35.54	32922.36
4	1	1983	269.00	233.20	35.80	32886.56
5	1	1983	269.00	232.94	36.05	32850.50
6	1	1983	269.00	232.69	36.30	32814.19
7	1	1983	269.00	232.43	36.56	32777.62
8	1	1983	269.00	232.17	36.82	32740.79
9	1	1983	269.00	231.91	37.08	32703.70
10	1	1983	269.00	231.65	37.34	32666.35
11	1	1983	269.00	231.38	37.61	32628.73
12	1	1983	269.00	231.12	37.87	32590.85
		INTEREST FOR YEAR 20187.13				
1	1	1984	269.00	230.85	38.14	32552.70
2	1	1984	269.00	230.58	38.41	32514.28
3	1	1984	269.00	230.30	38.69	32475.58
4	1	1984	269.00	230.03	38.96	32436.62
5	1	1984	269.00	229.75	39.24	32397.38
6	1	1984	269.00	229.48	39.51	32357.86
7	1	1984	269.00	229.20	39.79	32318.06
8	1	1984	269.00	228.91	40.08	32277.98
9	1	1984	269.00	228.63	40.36	32237.61
10	1	1984	269.00	228.34	40.65	32196.96
11	1	1984	269.00	228.06	40.93	32156.01
12	1	1984	269.00	227.77	41.22	32114.78
		INTEREST FOR YEAR 22939.07				
1	1	1985	269.00	227.47	41.52	32073.26
2	1	1985	269.00	227.18	41.81	32031.44
3	1	1985	269.00	226.88	42.11	31989.33
4	1	1985	269.00	226.59	42.40	31946.92
5	1	1985	269.00	226.29	42.70	31904.21
6	1	1985	269.00	225.98	43.01	31861.19
7	1	1985	269.00	225.68	43.31	31817.87
8	1	1985	269.00	225.37	43.62	31774.25

9	1	1985	269.00	225.06	43.93	31730.32
10	1	1985	269.00	224.75	44.24	31686.07
11	1	1985	269.00	224.44	44.55	31641.51
12	1	1985	269.00	224.12	44.87	31596.64
		INTEREST FOR YEAR 25648.92				
1	1	1986	269.00	223.80	45.19	31551.44
2	1	1986	269.00	223.48	45.51	31505.93
3	1	1986	269.00	223.16	45.83	31460.10
4	1	1986	269.00	222.84	46.15	31413.94
5	1	1986	269.00	222.51	46.48	31367.45
6	1	1986	269.00	222.18	46.81	31320.63
7	1	1986	269.00	221.85	47.14	31273.48
8	1	1986	269.00	221.52	47.47	31226.00
9	1	1986	269.00	221.18	47.81	31178.19
10	1	1986	269.00	220.84	48.15	31130.03
11	1	1986	269.00	220.50	48.49	31081.53
12	1	1986	269.00	220.16	48.83	31032.69
		INTEREST FOR YEAR 28312.98				
1	1	1987	269.00	219.81	49.18	30983.51
2	1	1987	269.00	219.46	49.53	30933.97
3	1	1987	269.00	219.11	49.88	30884.08
4	1	1987	269.00	218.76	50.23	30833.85
5	1	1987	269.00	218.40	50.59	30783.25
6	1	1987	269.00	218.04	50.95	30732.30
7	1	1987	269.00	217.68	51.31	30680.98
8	1	1987	269.00	217.32	51.67	30629.30
9	1	1987	269.00	216.95	52.04	30577.26
10	1	1987	269.00	216.58	52.41	30524.85
11	1	1987	269.00	216.21	52.78	30472.06
12	1	1987	269.00	215.84	53.15	30418.91
		INTEREST FOR YEAR 30927.19				
1	1	1988	269.00	215.46	53.53	30365.37
2	1	1988	269.00	215.08	53.91	30311.46
3	1	1988	269.00	214.70	54.29	30257.16
4	1	1988	269.00	214.32	54.67	30202.48
5	1	1988	269.00	213.93	55.06	30147.41
6	1	1988	269.00	213.54	55.45	30091.96
7	1	1988	269.00	213.15	55.84	30036.10
8	1	1988	269.00	212.75	56.24	29979.86
9	1	1988	269.00	212.35	56.64	29923.21
10	1	1988	269.00	211.95	57.04	29866.17
11	1	1988	269.00	211.55	57.44	29808.72
12	1	1988	269.00	211.14	57.85	29750.86
		INTEREST FOR YEAR 33487.14				
1	1	1989	269.00	210.73	58.26	29692.60
2	1	1989	269.00	210.32	58.67	29633.92
3	1	1989	269.00	209.90	59.09	29574.82
4	1	1989	269.00	209.48	59.51	29515.31
5	1	1989	269.00	209.06	59.93	29455.38
6	1	1989	269.00	208.64	60.35	29395.02
7	1	1989	269.00	208.21	60.78	29334.23
8	1	1989	269.00	207.78	61.21	29273.01
9	1	1989	269.00	207.35	61.64	29211.36
10	1	1989	269.00	206.91	62.08	29149.27
11	1	1989	269.00	206.47	62.52	29086.74
12	1	1989	269.00	206.03	62.96	29023.77
		INTEREST FOR YEAR 35988.02				
1	1	1990	269.00	205.58	63.41	28960.35
2	1	1990	269.00	205.13	63.86	28896.48
3	1	1990	269.00	204.68	64.31	28832.16
4	1	1990	269.00	204.22	64.77	28767.39

5	1	1990	269.00	203.76	65.23	28702.16
6	1	1990	269.00	203.30	65.69	28636.46
7	1	1990	269.00	202.84	66.15	28570.30
8	1	1990	269.00	202.37	66.62	28503.67
9	1	1990	269.00	201.90	67.09	28436.57
10	1	1990	269.00	201.42	67.57	28368.99
11	1	1990	269.00	200.94	68.05	28300.94
12	1	1990	269.00	200.46	68.53	28232.40
		INTEREST FOR YEAR 38424.64				
1	1	1991	269.00	199.97	69.02	28163.38
2	1	1991	269.00	199.49	69.50	28093.87
3	1	1991	269.00	198.99	70.00	28023.86
4	1	1991	269.00	198.50	70.49	27953.36
5	1	1991	269.00	198.00	70.99	27882.36
6	1	1991	269.00	197.50	71.49	27810.86
7	1	1991	269.00	196.99	72.00	27738.85
8	1	1991	269.00	196.48	72.51	27666.33
9	1	1991	269.00	195.96	73.03	27593.30
10	1	1991	269.00	195.45	73.54	27519.75
11	1	1991	269.00	194.93	74.06	27445.68
12	1	1991	269.00	194.40	74.59	27371.09
		INTEREST FOR YEAR 40791.31				
1	1	1992	269.00	193.87	75.12	27295.96
2	1	1992	269.00	193.34	75.65	27220.31
3	1	1992	269.00	192.81	76.18	27144.12
4	1	1992	269.00	192.27	76.72	27067.39
5	1	1992	269.00	191.72	77.27	26990.11
6	1	1992	269.00	191.17	77.82	26912.29
7	1	1992	269.00	190.62	78.37	26833.92
8	1	1992	269.00	190.07	78.92	26754.99
9	1	1992	269.00	189.51	79.48	26675.50
10	1	1992	269.00	188.95	80.04	26595.45
11	1	1992	269.00	188.38	80.61	26514.83
12	1	1992	269.00	187.81	81.18	26433.64
		INTEREST FOR YEAR 43081.85				
1	1	1993	269.00	187.23	81.76	26351.88
2	1	1993	269.00	186.65	82.34	26269.54
3	1	1993	269.00	186.07	82.92	26186.61
4	1	1993	269.00	185.48	83.51	26103.10
5	1	1993	269.00	184.89	84.10	26019.00
6	1	1993	269.00	184.30	84.69	25934.30
7	1	1993	269.00	183.70	85.29	25849.00
8	1	1993	269.00	183.09	85.90	25763.09
9	1	1993	269.00	182.48	86.51	25676.58
10	1	1993	269.00	181.87	87.12	25589.45
11	1	1993	269.00	181.25	87.74	25501.71
12	1	1993	269.00	180.63	88.36	25413.35
		INTEREST FOR YEAR 45289.52				
1	1	1994	269.00	180.01	88.98	25324.35
2	1	1994	269.00	179.38	89.61	25234.73
3	1	1994	269.00	178.74	90.25	25144.48
4	1	1994	269.00	178.10	90.89	25053.58
5	1	1994	269.00	177.46	91.53	24962.04
6	1	1994	269.00	176.81	92.18	24869.85
7	1	1994	269.00	176.16	92.83	24777.01
8	1	1994	269.00	175.50	93.49	24683.51
9	1	1994	269.00	174.84	94.15	24589.35
10	1	1994	269.00	174.17	94.82	24494.53
11	1	1994	269.00	173.50	95.49	24399.03
12	1	1994	269.00	172.82	96.17	24302.85
		INTEREST FOR YEAR 47407.00				

1	1	1995	269.00	172.14	96.85	24206.00
2	1	1995	269.00	171.45	97.54	24108.45
3	1	1995	269.00	170.76	98.23	24010.22
4	1	1995	269.00	170.07	98.92	23911.29
5	1	1995	269.00	169.37	99.62	23811.66
6	1	1995	269.00	168.66	100.33	23711.32
7	1	1995	269.00	167.95	101.04	23610.28
8	1	1995	269.00	167.23	101.76	23508.51
9	1	1995	269.00	166.51	102.48	23406.03
10	1	1995	269.00	165.79	103.20	23302.82
11	1	1995	269.00	165.06	103.93	23198.88
12	1	1995	269.00	164.32	104.67	23094.20
		INTEREST FOR YEAR 49426.33				
1	1	1996	269.00	163.58	105.41	22988.78
2	1	1996	269.00	162.83	106.16	22882.62
3	1	1996	269.00	162.08	106.91	22775.70
4	1	1996	269.00	161.32	107.67	22668.03
5	1	1996	269.00	160.56	108.43	22559.59
6	1	1996	269.00	159.79	109.20	22450.39
7	1	1996	269.00	159.02	109.97	22340.41
8	1	1996	269.00	158.24	110.75	22229.65
9	1	1996	269.00	157.46	111.53	22118.11
10	1	1996	269.00	156.66	112.33	22005.78
11	1	1996	269.00	155.87	113.12	21892.65
12	1	1996	269.00	155.07	113.92	21778.72
		INTEREST FOR YEAR 51338.82				
1	1	1997	269.00	154.26	114.73	21663.98
2	1	1997	269.00	153.45	115.54	21548.44
3	1	1997	269.00	152.63	116.36	21432.07
4	1	1997	269.00	151.81	117.18	21314.88
5	1	1997	269.00	150.98	118.01	21196.85
6	1	1997	269.00	150.14	118.85	21078.00
7	1	1997	269.00	149.30	119.69	20958.30
8	1	1997	269.00	148.45	120.54	20837.75
9	1	1997	269.00	147.60	121.39	20716.35
10	1	1997	269.00	146.74	122.25	20594.08
11	1	1997	269.00	145.87	123.12	20470.96
12	1	1997	269.00	145.00	123.99	20346.96
		INTEREST FOR YEAR 53135.04				
1	1	1998	269.00	144.12	124.87	20222.08
2	1	1998	269.00	143.23	125.76	20096.32
3	1	1998	269.00	142.34	126.65	19969.66
4	1	1998	269.00	141.45	127.54	19842.11
5	1	1998	269.00	140.54	128.45	19713.66
6	1	1998	269.00	139.63	129.36	19584.30
7	1	1998	269.00	138.72	130.27	19454.01
8	1	1998	269.00	137.79	131.20	19322.81
9	1	1998	269.00	136.86	132.13	19190.68
10	1	1998	269.00	135.93	133.06	19057.61
11	1	1998	269.00	134.99	134.00	18923.60
12	1	1998	269.00	134.04	134.95	18788.64
		INTEREST FOR YEAR 54804.70				
1	1	1999	269.00	133.08	135.91	18652.73
2	1	1999	269.00	132.12	136.87	18515.85
3	1	1999	269.00	131.15	137.84	18378.00
4	1	1999	269.00	130.17	138.82	18239.17
5	1	1999	269.00	129.19	139.80	18099.37
6	1	1999	269.00	128.20	140.79	17958.57
7	1	1999	269.00	127.20	141.79	17816.77
8	1	1999	269.00	126.20	142.79	17673.97
9	1	1999	269.00	125.19	143.80	17530.16

10	1	1999	269.00	124.17	144.82	17385.33
11	1	1999	269.00	123.14	145.85	17239.48
12	1	1999	269.00	122.11	146.88	17092.58

INTEREST FOR YEAR 56336.62

1	1	2000	269.00	121.07	147.92	16944.66
2	1	2000	269.00	120.02	148.97	16795.68
3	1	2000	269.00	118.96	150.03	16645.65
4	1	2000	269.00	117.90	151.09	16494.55
5	1	2000	269.00	116.83	152.16	16342.39
6	1	2000	269.00	115.75	153.24	16189.15
7	1	2000	269.00	114.67	154.32	16034.82
8	1	2000	269.00	113.57	155.42	15879.40
9	1	2000	269.00	112.47	156.52	15722.87
10	1	2000	269.00	111.37	157.62	15565.24
11	1	2000	269.00	110.25	158.74	15406.50
12	1	2000	269.00	109.12	159.87	15246.62

INTEREST FOR YEAR 57718.65

1	1	2001	269.00	107.99	161.00	15085.62
2	1	2001	269.00	106.85	162.14	14923.48
3	1	2001	269.00	105.70	163.29	14760.18
4	1	2001	269.00	104.55	164.44	14595.73
5	1	2001	269.00	103.38	165.61	14430.12
6	1	2001	269.00	102.21	166.78	14263.33
7	1	2001	269.00	101.03	167.96	14095.36
8	1	2001	269.00	99.84	169.15	13926.20
9	1	2001	269.00	98.64	170.35	13755.85
10	1	2001	269.00	97.43	171.56	13584.28
11	1	2001	269.00	96.22	172.77	13411.50
12	1	2001	269.00	94.99	174.00	13237.50

INTEREST FOR YEAR 58937.49

1	1	2002	269.00	93.76	175.23	13062.27
2	1	2002	269.00	92.52	176.47	12885.79
3	1	2002	269.00	91.27	177.72	12708.06
4	1	2002	269.00	90.01	178.98	12529.08
5	1	2002	269.00	88.74	180.25	12348.82
6	1	2002	269.00	87.47	181.52	12167.29
7	1	2002	269.00	86.18	182.81	11984.48
8	1	2002	269.00	84.89	184.10	11800.37
9	1	2002	269.00	83.58	185.41	11614.95
10	1	2002	269.00	82.27	186.72	11428.22
11	1	2002	269.00	80.94	188.05	11240.17
12	1	2002	269.00	79.61	189.38	11050.79

INTEREST FOR YEAR 59978.75

1	1	2003	269.00	78.27	190.72	10860.07
2	1	2003	269.00	76.92	192.07	10667.99
3	1	2003	269.00	75.56	193.43	10474.55
4	1	2003	269.00	74.19	194.80	10279.75
5	1	2003	269.00	72.81	196.18	10083.56
6	1	2003	269.00	71.42	197.57	9885.99
7	1	2003	269.00	70.02	198.97	9687.01
8	1	2003	269.00	68.61	200.38	9486.63
9	1	2003	269.00	67.19	201.80	9284.82
10	1	2003	269.00	65.76	203.23	9081.59
11	1	2003	269.00	64.32	204.67	8876.91
12	1	2003	269.00	62.87	206.12	8670.79

INTEREST FOR YEAR 60826.71

1	1	2004	269.00	61.41	207.58	8463.21
2	1	2004	269.00	59.94	209.05	8254.16
3	1	2004	269.00	58.46	210.53	8043.62
4	1	2004	269.00	56.97	212.02	7831.60
5	1	2004	269.00	55.47	213.52	7618.07

6	1	2004	269.00	53.96	215.03	7403.03
7	1	2004	269.00	52.43	216.56	7186.47
8	1	2004	269.00	50.90	218.09	6968.37
9	1	2004	269.00	49.35	219.64	6748.73
10	1	2004	269.00	47.80	221.19	6527.53
11	1	2004	269.00	46.23	222.76	6304.77
12	1	2004	269.00	44.65	224.34	6080.43
		INTEREST FOR YEAR 61464.31				
1	1	2005	269.00	43.06	225.93	5854.50
2	1	2005	269.00	41.46	227.53	5626.97
3	1	2005	269.00	39.85	229.14	5397.82
4	1	2005	269.00	38.23	230.76	5167.06
5	1	2005	269.00	36.60	232.40	4934.66
6	1	2005	269.00	34.95	234.04	4700.61
7	1	2005	269.00	33.29	235.70	4464.91
8	1	2005	269.00	31.62	237.37	4227.53
9	1	2005	269.00	29.94	239.05	3988.48
10	1	2005	269.00	28.25	240.74	3747.73
11	1	2005	269.00	26.54	242.45	3505.27
12	1	2005	269.00	24.82	244.17	3261.10
		INTEREST FOR YEAR 61872.94				
1	1	2006	269.00	23.09	245.90	3015.20
2	I	2006	269.00	21.35	247.64	2767.56
3	1	2006	269.00	19.60	249.39	2518.16
4	1	2006	269.00	17.83	251.16	2267.00
5	1	2006	269.00	16.05	252.94	2014.06
6	1	2006	269.00	14.26	254.73	1759.32
7	1	2006	269.00	12.46	256.53	1502.79
8	1	2006	269.00	10.64	258.35	1244.43
9	1	2006	269.00	8.81	260.18	984.24
10	1	2006	269.00	6.97	262.02	722.22
11	1	2006	269.00	5.11	263.88	458.33
12	1	2006	269.00	3.24	265.75	192.58
		INTEREST FOR YEAR 62032.38				
1	1	2007	193.94	1.36	192.58	0.00
		INTEREST FOR YEAR 62032.38				
		NUMBER OF YEARS IS 30.				

APPENDIX B

VARIABLE-RATE MORTGAGE

```
// JOB

LOG DRIVE   CART SPEC   CART AVAIL  PHY DRIVE
  0000        1816        1816        0000

V2 M11   ACTUAL  8K   CONFIG  8K

// FOR
          *IOCS(CARD,1132 PRINTER)
          *LIST SOURCE PROGRAM

            READ(2,99)X,R,PA
         99 FORMAT(3(F10.2))
            WRITE(3,10)X,R,PA
         10 FORMAT(1X,3(F9.2,2X))
            WRITE(3,30)
         30 FORMAT(1X,'MONTH',2X,'DAY',1X,'YEAR',1X,'PAYMENT',2X,'INTEREST',2X
           1,'PRINCIPAL',2X,'BALANCE')
            TOT=0
            M=1
            MY=1977
            MD=1
          8 XINT=X*R/12
            IF(X-PA)11,12,12
         11 PA=X+XINT
            PR=X
            X=0.
            GO TO 13
         12 PR=PA-XINT
            X=X-PR
            TOT=TOT+XINT
         13 WRITE(3,20)M,MD,MY,PA,XINT,PR,X
         20 FORMAT(2X,I2,2X,I2,2X,I4,2X,F7.2,2X,F7.2,2X,F7.2,2X,F8.2)
            IF(X)6,6,9
          9 M=M+1
            IF(M-12)8,8,7
          7 M=1
            MY=MY+1
            IF(MY-1982)100,101,102
        101 R=.08
        100 WRITE(3,50)TOT
         50 FORMAT(10X,'INTEREST FOR YEAR',F9.2)
            GO TO 8
        102 IF(MY-1987)100,104,105
        104 R=.085
            GO TO 100
        105 IF(MY-1992)100,106,107
        106 R=.075
            GO TO 100
        107 IF(MY-2007)100,108,109
        108 R=.07
            GO TO 100
          6 WRITE(3,60)TOT
         60 FORMAT(10X,'INTEREST FOR YEAR',F9.2)
            MY=MY-1977
            WRITE(3,70)MY
         70 FORMAT(10X,'NUMBER OF YEARS IS ',I2,'.')
```

```
          109 CALL EXIT
              END

FEATURES SUPPORTED
 ONE WORD INTEGERS
 STANDARD PRECISION
 IOCS-
   1132 PRINTER
   CARD

CORE REQUIREMENTS FOR -


END OF SUCCESSFUL COMPILATION

// XEQ

 35000.00          0.09       269.00
MONTH   DAY YEAR PAYMENT   INTEREST   PRINCIPAL  BALANCE
  1      1  1977  269.00    262.50       6.50   34993.50
  2      1  1977  269.00    262.45       6.54   34986.94
  3      1  1977  269.00    262.40       6.59   34980.34
  4      1  1977  269.00    262.35       6.64   34973.69
  5      1  1977  269.00    262.30       6.69   34966.99
  6      1  1977  269.00    262.25       6.74   34960.24
  7      1  1977  269.00    262.20       6.79   34953.43
  8      1  1977  269.00    262.15       6.84   34946.58
  9      1  1977  269.00    262.09       6.90   34939.67
 10      1  1977  269.00    262.04       6.95   34932.72
 11      1  1977  269.00    261.99       7.00   34925.71
 12      1  1977  269.00    261.94       7.05   34918.65
            INTEREST FOR YEAR  3146.69
  1      1  1978  269.00    261.88       7.11   34911.53
  2      1  1978  269.00    261.83       7.16   34904.37
  3      1  1978  269.00    261.78       7.21   34897.15
  4      1  1978  269.00    261.72       7.27   34889.88
  5      1  1978  269.00    261.67       7.32   34882.55
  6      1  1978  269.00    261.61       7.38   34875.17
  7      1  1978  269.00    261.56       7.43   34867.73
  8      1  1978  269.00    261.50       7.49   34860.24
  9      1  1978  269.00    261.45       7.54   34852.68
 10      1  1978  269.00    261.39       7.60   34845.07
 11      1  1978  269.00    261.33       7.66   34837.41
 12      1  1978  269.00    261.28       7.71   34829.68
            INTEREST FOR YEAR  6285.76
  1      1  1979  269.00    261.22       7.77   34821.90
  2      1  1979  269.00    261.16       7.83   34814.07
  3      1  1979  269.00    261.10       7.89   34806.17
  4      1  1979  269.00    261.04       7.95   34798.21
  5      1  1979  269.00    260.98       8.01   34790.19
  6      1  1979  269.00    260.92       8.07   34782.11
  7      1  1979  269.00    260.86       8.13   34773.97
  8      1  1979  269.00    260.80       8.19   34765.78
  9      1  1979  269.00    260.74       8.25   34757.52
 10      1  1979  269.00    260.68       8.31   34749.20
 11      1  1979  269.00    260.61       8.38   34740.82
```

12	1	1979	269.00	260.55	8.44	34732.37
		INTEREST FOR YEAR 9416.47				
1	1	1980	269.00	260.49	8.50	34723.86
2	1	1980	269.00	260.42	8.57	34715.28
3	1	1980	269.00	260.36	8.63	34706.64
4	1	1980	269.00	260.29	8.70	34697.94
5	1	1980	269.00	260.23	8.76	34689.17
6	1	1980	269.00	260.16	8.83	34680.34
7	1	1980	269.00	260.10	8.89	34671.44
8	1	1980	269.00	260.03	8.96	34662.47
9	1	1980	269.00	259.96	9.03	34653.43
10	1	1980	269.00	259.90	9.09	34644.33
11	1	1980	269.00	259.83	9.16	34635.16
12	1	1980	269.00	259.76	9.23	34625.92
		INTEREST FOR YEAR 12538.05				
1	1	1981	269.00	259.69	9.30	34616.60
2	1	1981	269.00	259.62	9.37	34607.22
3	1	1981	269.00	259.55	9.44	34597.77
4	1	1981	269.00	259.48	9.51	34588.25
5	1	1981	269.00	259.41	9.58	34578.65
6	1	1981	269.00	259.33	9.66	34568.99
7	1	1981	269.00	259.26	9.73	34559.25
8	1	1981	269.00	259.19	9.80	34549.44
9	1	1981	269.00	259.12	9.87	34539.56
10	1	1981	269.00	259.04	9.95	34529.60
11	1	1981	269.00	258.97	10.02	34519.57
12	1	1981	269.00	258.89	10.10	34509.46
		INTEREST FOR YEAR 15649.64				
1	1	1982	269.00	230.06	38.93	34470.52
2	1	1982	269.00	229.80	39.19	34431.32
3	1	1982	269.00	229.54	39.45	34391.85
4	1	1982	269.00	229.27	39.72	34352.13
5	1	1982	269.00	229.01	39.98	34312.14
6	1	1982	269.00	228.74	40.25	34271.88
7	1	1982	269.00	228.47	40.52	34231.35
8	1	1982	269.00	228.20	40.79	34190.56
9	1	1982	269.00	227.93	41.06	34149.49
10	1	1982	269.00	227.66	41.33	34108.14
11	1	1982	269.00	227.38	41.61	34066.53
12	1	1982	269.00	227.11	41.88	34024.64
		INTEREST FOR YEAR 18392.86				
1	1	1983	269.00	226.83	42.16	33982.46
2	1	1983	269.00	226.54	42.45	33940.01
3	1	1983	269.00	226.26	42.73	33897.28
4	1	1983	269.00	225.98	43.01	33854.25
5	1	1983	269.00	225.69	43.30	33810.94
6	1	1983	269.00	225.40	43.59	33767.34
7	1	1983	269.00	225.11	43.88	33723.45
8	1	1983	269.00	224.82	44.17	33679.27
9	1	1983	269.00	224.52	44.47	33634.79
10	1	1983	269.00	224.23	44.76	33590.02
11	1	1983	269.00	223.93	45.06	33544.95
12	1	1983	269.00	223.63	45.36	33499.58
		INTEREST FOR YEAR 21095.83				
1	1	1984	269.00	223.33	45.66	33453.91
2	1	1984	269.00	223.02	45.97	33407.93
3	1	1984	269.00	222.71	46.28	33361.65
4	1	1984	269.00	222.41	46.58	33315.06
5	1	1984	269.00	222.10	46.89	33268.15
6	1	1984	269.00	221.78	47.21	33220.93
7	1	1984	269.00	221.47	47.52	33173.40

8	1	1984	269.00	221.15	47.84	33125.55
9	1	1984	269.00	220.83	48.16	33077.39
10	1	1984	269.00	220.51	48.48	33028.90
11	1	1984	269.00	220.19	48.80	32980.09
12	1	1984	269.00	219.86	49.13	32930.96
		INTEREST FOR YEAR 23755.23				
1	1	1985	269.00	219.53	49.46	32881.50
2	1	1985	269.00	219.20	49.79	32831.70
3	1	1985	269.00	218.87	50.12	32781.57
4	1	1985	269.00	218.54	50.45	32731.11
5	1	1985	269.00	218.20	50.79	32680.32
6	1	1985	269.00	217.86	51.13	32629.19
7	1	1985	269.00	217.52	51.47	32577.71
8	1	1985	269.00	217.18	51.81	32525.90
9	1	1985	269.00	216.83	52.16	32473.73
10	1	1985	269.00	216.49	52.50	32421.22
11	1	1985	269.00	216.14	52.85	32368.36
12	1	1985	269.00	215.78	53.21	32315.15
		INTEREST FOR YEAR 26367.43				
1	1	1986	269.00	215.43	53.56	32261.58
2	1	1986	269.00	215.07	53.92	32207.66
3	1	1986	269.00	214.71	54.28	32153.37
4	1	1986	269.00	214.35	54.64	32098.73
5	1	1986	269.00	213.99	55.00	32043.72
6	1	1986	269.00	213.62	55.37	31988.34
7	1	1986	269.00	213.25	55.74	31932.59
8	1	1986	269.00	212.88	56.11	31876.48
9	1	1986	269.00	212.50	56.49	31819.98
10	1	1986	269.00	212.13	56.86	31763.12
11	1	1986	269.00	211.75	57.24	31705.87
12	1	1986	269.00	211.37	57.62	31648.24
		INTEREST FOR YEAR 28928.52				
1	1	1987	269.00	224.17	44.82	31603.41
2	1	1987	269.00	223.85	45.14	31558.27
3	1	1987	269.00	223.53	45.46	31512.80
4	1	1987	269.00	223.21	45.78	31467.02
5	1	1987	269.00	222.89	46.10	31420.91
6	1	1987	269.00	222.56	46.43	31374.47
7	1	1987	269.00	222.23	46.76	31327.71
8	1	1987	269.00	221.90	47.09	31280.61
9	1	1987	269.00	221.57	47.42	31233.18
10	1	1987	269.00	221.23	47.76	31185.41
11	1	1987	269.00	220.89	48.10	31137.31
12	1	1987	269.00	220.55	48.44	31088.86
		INTEREST FOR YEAR 31597.14				
1	1	1988	269.00	220.21	48.78	31040.07
2	1	1988	269.00	219.86	49.13	30990.94
3	1	1988	269.00	219.51	49.48	30941.45
4	1	1988	269.00	219.16	49.83	30891.62
5	1	1988	269.00	218.81	50.18	30841.43
6	1	1988	269.00	218.46	50.53	30790.89
7	1	1988	269.00	218.10	50.89	30739.99
8	1	1988	269.00	217.74	51.25	30688.73
9	1	1988	269.00	217.37	51.62	30637.10
10	1	1988	269.00	217.01	51.98	30585.12
11	1	1988	269.00	216.64	52.35	30532.76
12	1	1988	269.00	216.27	52.72	30480.03
		INTEREST FOR YEAR 34216.30				
1	1	1989	269.00	215.90	53.09	30426.93
2	1	1989	269.00	215.52	53.47	30373.46
3	1	1989	269.00	215.14	53.85	30319.60

4	1	1989	269.00	214.76	54.23	30265.36
5	1	1989	269.00	214.37	54.62	30210.74
6	1	1989	269.00	213.99	55.00	30155.73
7	1	1989	269.00	213.60	55.39	30100.33
8	1	1989	269.00	213.21	55.78	30044.54
9	1	1989	269.00	212.81	56.18	29988.35
10	1	1989	269.00	212.41	56.58	29931.77
11	1	1989	269.00	212.01	56.98	29874.78
12	1	1989	269.00	211.61	57.38	29817.39
		INTEREST FOR YEAR 36781.64				
1	1	1990	269.00	211.20	57.79	29759.60
2	1	1990	269.00	210.79	58.20	29701.39
3	1	1990	269.00	210.38	58.61	29642.78
4	1	1990	269.00	209.96	59.03	29583.75
5	1	1990	269.00	209.55	59.44	29524.30
6	1	1990	269.00	209.13	59.86	29464.42
7	1	1990	269.00	208.70	60.29	29404.13
8	1	1990	269.00	208.27	60.72	29343.41
9	1	1990	269.00	207.84	61.15	29282.25
10	1	1990	269.00	207.41	61.58	29220.67
11	1	1990	269.00	206.97	62.02	29158.64
12	1	1990	269.00	206.54	62.45	29096.18
		INTEREST FOR YEAR 39288.42				
1	1	1991	269.00	206.09	62.90	29033.28
2	1	1991	269.00	205.65	63.34	28969.93
3	1	1991	269.00	205.20	63.79	28906.14
4	1	1991	269.00	204.75	64.24	28841.89
5	1	1991	269.00	204.29	64.70	28777.18
6	1	1991	269.00	203.83	65.16	28712.01
7	1	1991	269.00	203.37	65.62	28646.39
8	1	1991	269.00	202.91	66.08	28580.30
9	1	1991	269.00	202.44	66.55	28513.74
10	1	1991	269.00	201.97	67.02	28446.71
11	1	1991	269.00	201.49	67.50	28379.21
12	1	1991	269.00	201.01	67.98	28311.22
		INTEREST FOR YEAR 41731.43				
1	1	1992	269.00	176.94	92.05	28219.16
2	1	1992	269.00	176.36	92.63	28126.53
3	1	1992	269.00	175.79	93.20	28033.32
4	1	1992	269.00	175.20	93.79	27939.53
5	1	1992	269.00	174.62	94.37	27845.15
6	1	1992	269.00	174.03	94.96	27750.18
7	1	1992	269.00	173.43	95.56	27654.62
8	1	1992	269.00	172.84	96.15	27558.46
9	1	1992	269.00	172.24	96.75	27461.69
10	1	1992	269.00	171.63	97.36	27364.33
11	1	1992	269.00	171.02	97.97	27266.35
12	1	1992	269.00	170.41	98.58	27167.76
		INTEREST FOR YEAR 43815.96				
1	1	1993	269.00	169.79	99.20	27068.56
2	1	1993	269.00	169.17	99.82	26968.74
3	1	1993	269.00	168.55	100.44	26868.29
4	1	1993	269.00	167.92	101.07	26767.21
5	1	1993	269.00	167.29	101.70	26665.51
6	1	1993	269.00	166.65	102.34	26563.16
7	1	1993	269.00	166.01	102.98	26460.18
8	1	1993	269.00	165.37	103.62	26356.56
9	1	1993	269.00	164.72	104.27	26252.28
10	1	1993	269.00	164.07	104.92	26147.36
11	1	1993	269.00	163.42	105.57	26041.78
12	1	1993	269.00	162.76	106.23	25935.53

INTEREST FOR YEAR 45811.70

1	1	1994	269.00	162.09	106.90	25828.63
2	1	1994	269.00	161.42	107.57	25721.05
3	1	1994	269.00	160.75	108.24	25612.81
4	1	1994	269.00	160.08	108.91	25503.89
5	1	1994	269.00	159.39	109.60	25394.28
6	1	1994	269.00	158.71	110.28	25284.00
7	1	1994	269.00	158.02	110.97	25173.02
8	1	1994	269.00	157.33	111.66	25061.35
9	1	1994	269.00	156.63	112.36	24948.98
10	1	1994	269.00	155.93	113.06	24835.91
11	1	1994	269.00	155.22	113.77	24722.13
12	1	1994	269.00	154.51	114.48	24607.64

INTEREST FOR YEAR 47711.79

1	1	1995	269.00	153.79	115.20	24492.44
2	1	1995	269.00	153.07	115.92	24376.51
3	1	1995	269.00	152.35	116.64	24259.87
4	1	1995	269.00	151.62	117.37	24142.49
5	1	1995	269.00	150.89	118.10	24024.37
6	1	1995	269.00	150.15	118.84	23905.52
7	1	1995	269.00	149.40	119.59	23785.93
8	1	1995	269.00	148.66	120.33	23665.59
9	1	1995	269.00	147.90	121.09	23544.50
10	1	1995	269.00	147.15	121.84	23422.65
11	1	1995	269.00	146.39	122.60	23300.04
12	1	1995	269.00	145.62	123.37	23176.66

INTEREST FOR YEAR 49508.79

1	1	1996	269.00	144.85	124.14	23052.51
2	1	1996	269.00	144.07	124.92	22927.59
3	1	1996	269.00	143.29	125.70	22801.89
4	1	1996	269.00	142.51	126.48	22675.40
5	1	1996	269.00	141.72	127.27	22548.12
6	1	1996	269.00	140.92	128.07	22420.04
7	1	1996	269.00	140.12	128.87	22291.17
8	1	1996	269.00	139.31	129.68	22161.48
9	1	1996	269.00	138.50	130.49	22030.99
10	1	1996	269.00	137.69	131.30	21899.68
11	1	1996	269.00	136.87	132.12	21767.55
12	1	1996	269.00	136.04	132.95	21634.60

INTEREST FOR YEAR 51194.71

1	1	1997	269.00	135.21	133.78	21500.82
2	1	1997	269.00	134.38	134.61	21366.19
3	1	1997	269.00	133.53	135.46	21230.73
4	1	1997	269.00	132.69	136.30	21094.42
5	1	1997	269.00	131.84	137.15	20957.26
6	1	1997	269.00	130.98	138.01	20819.24
7	1	1997	269.00	130.12	138.87	20680.36
8	1	1997	269.00	129.25	139.74	20540.61
9	1	1997	269.00	128.37	140.62	20399.98
10	1	1997	269.00	127.49	141.50	20258.48
11	1	1997	269.00	126.61	142.38	20116.09
12	1	1997	269.00	125.72	143.27	19972.82

INTEREST FOR YEAR 52760.89

1	1	1998	269.00	124.83	144.16	19828.64
2	1	1998	269.00	123.92	145.07	19683.57
3	1	1998	269.00	123.02	145.97	19537.59
4	1	1998	269.00	122.10	146.89	19390.70
5	1	1998	269.00	121.19	147.80	19242.89
6	1	1998	269.00	120.26	148.73	19094.16
7	1	1998	269.00	119.33	149.66	18944.49
8	1	1998	269.00	118.40	150.59	18793.89

9	1	1998	269.00	117.46	151.53	18642.35
10	1	1998	269.00	116.51	152.48	18489.87
11	1	1998	269.00	115.56	153.43	18336.42
12	1	1998	269.00	114.60	154.39	18182.03
		INTEREST FOR YEAR 54198.08				
1	1	1999	269.00	113.63	155.36	18026.66
2	1	1999	269.00	112.66	156.33	17870.33
3	1	1999	269.00	111.68	157.31	17713.01
4	1	1999	269.00	110.70	158.29	17554.72
5	1	1999	269.00	109.71	159.28	17395.43
6	1	1999	269.00	108.72	160.27	17235.15
7	1	1999	269.00	107.71	161.28	17073.87
8	1	1999	269.00	106.71	162.28	16911.58
9	1	1999	269.00	105.69	163.30	16748.28
10	1	1999	269.00	104.67	164.32	16583.95
11	1	1999	269.00	103.64	165.35	16418.60
12	1	1999	269.00	102.61	166.38	16252.21
		INTEREST FOR YEAR 55496.25				
1	1	2000	269.00	101.57	167.42	16084.79
2	1	2000	269.00	100.52	168.47	15916.32
3	1	2000	269.00	99.47	169.52	15746.80
4	1	2000	269.00	98.41	170.58	15576.21
5	1	2000	269.00	97.35	171.64	15404.56
6	1	2000	269.00	96.27	172.72	15231.84
7	1	2000	269.00	95.19	173.80	15058.04
8	1	2000	269.00	94.11	174.88	14883.15
9	1	2000	269.00	93.01	175.98	14707.17
10	1	2000	269.00	91.91	177.08	14530.08
11	1	2000	269.00	90.81	178.18	14351.90
12	1	2000	269.00	89.69	179.30	14172.60
		INTEREST FOR YEAR 56644.60				
1	1	2001	269.00	88.57	180.42	13992.17
2	1	2001	269.00	87.45	181.54	13810.62
3	1	2001	269.00	86.31	182.68	13627.94
4	1	2001	269.00	85.17	183.82	13444.11
5	1	2001	269.00	84.02	184.97	13259.14
6	1	2001	269.00	82.86	186.13	13073.01
7	1	2001	269.00	81.70	187.29	12885.71
8	1	2001	269.00	80.53	188.46	12697.25
9	1	2001	269.00	79.35	189.64	12507.60
10	1	2001	269.00	78.17	190.82	12316.78
11	1	2001	269.00	76.97	192.02	12124.75
12	1	2001	269.00	75.77	193.22	11931.53
		INTEREST FOR YEAR 57631.50				
1	1	2002	269.00	74.57	194.42	11737.10
2	1	2002	269.00	73.35	195.64	11541.46
3	1	2002	269.00	72.13	196.86	11344.59
4	1	2002	269.00	70.90	198.09	11146.50
5	1	2002	269.00	69.66	199.33	10947.16
6	1	2002	269.00	68.41	200.58	10746.58
7	1	2002	269.00	67.16	201.83	10544.74
8	1	2002	269.00	65.90	203.09	10341.65
9	1	2002	269.00	64.63	204.36	10137.28
10	1	2002	269.00	63.35	205.64	9931.64
11	1	2002	269.00	62.07	206.92	9724.71
12	1	2002	269.00	60.77	208.22	9516.49
		INTEREST FOR YEAR 58444.42				
1	1	2003	269.00	59.47	209.52	9306.97
2	1	2003	269.00	58.16	210.83	9096.14
3	1	2003	269.00	56.85	212.14	8883.99
4	1	2003	269.00	55.52	213.47	8670.51

5	1	2003	269.00	54.19	214.80	8455.70
6	1	2003	269.00	52.84	216.15	8239.55
7	1	2003	269.00	51.49	217.50	8022.04
8	1	2003	269.00	50.13	218.86	7803.18
9	1	2003	269.00	48.76	220.23	7582.95
10	1	2003	269.00	47.39	221.60	7361.34
11	1	2003	269.00	46.00	222.99	7138.35
12	1	2003	269.00	44.61	224.38	6913.96
		INTEREST FOR YEAR 59069.86				
1	1	2004	269.00	43.21	225.78	6688.18
2	1	2004	269.00	41.80	227.19	6460.98
3	1	2004	269.00	40.38	228.61	6232.36
4	1	2004	269.00	38.95	230.04	6002.31
5	1	2004	269.00	37.51	231.48	5770.82
6	1	2004	269.00	36.06	232.93	5537.89
7	1	2004	269.00	34.61	234.38	5303.50
8	1	2004	269.00	33.14	235.85	5067.65
9	1	2004	269.00	31.67	237.32	4830.32
10	1	2004	269.00	30.18	238.81	4591.51
11	1	2004	269.00	28.69	240.30	4351.21
12	1	2004	269.00	27.19	241.80	4109.40
		INTEREST FOR YEAR 59493.25				
1	1	2005	269.00	25.68	243.31	3866.08
2	1	2005	269.00	24.16	244.83	3621.25
3	1	2005	269.00	22.63	246.36	3374.88
4	1	2005	269.00	21.09	247.90	3126.97
5	1	2005	269.00	19.54	249.45	2877.52
6	1	2005	269.00	17.98	251.01	2626.50
7	1	2005	269.00	16.41	252.58	2373.91
8	1	2005	269.00	14.83	254.16	2119.75
9	1	2005	269.00	13.24	255.75	1864.00
10	1	2005	269.00	11.65	257.34	1606.65
11	1	2005	269.00	10.04	258.95	1347.69
12	1	2005	269.00	8.42	260.57	1087.11
		INTEREST FOR YEAR 59698.92				
1	1	2006	269.00	6.79	262.20	824.91
2	1	2006	269.00	5.15	263.84	561.06
3	1	2006	269.00	3.50	265.49	295.57
4	1	2006	269.00	1.84	267.15	28.42
5	1	2006	28.60	0.17	28.42	0.00
		INTEREST FOR YEAR 59716.21				
		NUMBER OF YEARS IS 29.				

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// FOR

          // JOB
```

APPENDIX C

DEFERRED PAYMENT MORTGAGE

```
// JOB

LOG DRIVE   CART SPEC   CART AVAIL  PHY DRIVE
  0000        1816        1816        0000

V2 M11   ACTUAL  8K  CONFIG  8K

// FOR
          *IOCS(CARD,1132 PRINTER)
          *LIST SOURCE PROGRAM


                READ(2,99)X,R,PA
             99 FORMAT(3(F10.2))
                WRITE(3,10)X,R,PA
             10 FORMAT(1X,3(F9.2,2X))
                WRITE(3,30)
             30 FORMAT(1X,'MONTH',2X,'DAY',1X,'YEAR',1X,'PAYMENT',2X,'INTEREST',2X
               1,'PRINCIPAL',2X,'BALANCE')
                TOT=0
                M=1
                MY=1977
                MD=1
              8 XINT=X*R/12
                IF(X-PA)11,12,12
             11 PA=X+XINT
                PR=X
                X=0.
                GO TO 13
             12 PR=PA-XINT
                X=X-PR
                TOT=TOT+XINT
             13 WRITE(3,20)M,MD,MY,PA,XINT,PR,X
             20 FORMAT(2X,I2,2X,I2,2X,I4,2X,F7.2,2X,F7.2,2X,F7.2,2X,F8.2)
                IF(X)6,6,9
              9 M=M+1
                IF(M-12)8,8,7
              7 M=1
                MY=MY+1
                IF(MY-1982)100,102,102
            100 WRITE(3,50)TOT
             50 FORMAT(10X,'INTEREST FOR YEAR',F9.2)
                GO TO 8
            102 CONTINUE
                IF(MY-1992)103,103,100
            103 PA=PA+PA*.03
                GO TO 100
              6 WRITE(3,60)TOT
             60 FORMAT(10X,'INTEREST FOR YEAR',F9.2)
                MY=MY-1977
                WRITE(3,70)MY
             70 FORMAT(10X,'NUMBER OF YEARS IS ',I2,'.')
                CALL EXIT
                END

FEATURES SUPPORTED
 ONE WORD INTEGERS
 STANDARD PRECISION
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 IOCS-
   1132 PRINTER
   CARD

CORE REQUIREMENTS FOR -


END OF SUCCESSFUL COMPILATION

// XEQ

 35000.00        0.085     223.00
MONTH   DAY YEAR PAYMENT   INTEREST  PRINCIPAL  BALANCE
  1     1   1977  223.00    247.91    -24.91   35024.92
  2     1   1977  223.00    248.09    -25.09   35050.00
  3     1   1977  223.00    248.27    -25.27   35075.27
  4     1   1977  223.00    248.44    -25.44   35100.71
  5     1   1977  223.00    248.63    -25.63   35126.34
  6     1   1977  223.00    248.81    -25.81   35152.14
  7     1   1977  223.00    248.99    -25.99   35178.14
  8     1   1977  223.00    249.17    -26.17   35204.31
  9     1   1977  223.00    249.36    -26.36   35230.67
 10     1   1977  223.00    249.55    -26.55   35257.21
 11     1   1977  223.00    249.73    -26.73   35283.95
 12     1   1977  223.00    249.92    -26.92   35310.87
            INTEREST FOR YEAR   2986.92
  1     1   1978  223.00    250.11    -27.11   35337.99
  2     1   1978  223.00    250.31    -27.31   35365.29
  3     1   1978  223.00    250.50    -27.50   35392.79
  4     1   1978  223.00    250.69    -27.69   35420.49
  5     1   1978  223.00    250.89    -27.89   35448.38
  6     1   1978  223.00    251.09    -28.09   35476.46
  7     1   1978  223.00    251.29    -28.29   35504.75
  8     1   1978  223.00    251.49    -28.49   35533.24
  9     1   1978  223.00    251.69    -28.69   35561.92
 10     1   1978  223.00    251.89    -28.89   35590.82
 11     1   1978  223.00    252.10    -29.10   35619.92
 12     1   1978  223.00    252.30    -29.30   35649.22
            INTEREST FOR YEAR   6001.32
  1     1   1979  223.00    252.51    -29.51   35678.73
  2     1   1979  223.00    252.72    -29.72   35708.45
  3     1   1979  223.00    252.93    -29.93   35738.38
  4     1   1979  223.00    253.14    -30.14   35768.52
  5     1   1979  223.00    253.36    -30.36   35798.88
  6     1   1979  223.00    253.57    -30.57   35829.45
  7     1   1979  223.00    253.79    -30.79   35860.24
  8     1   1979  223.00    254.00    -31.00   35891.25
  9     1   1979  223.00    254.22    -31.22   35922.47
 10     1   1979  223.00    254.45    -31.45   35953.92
 11     1   1979  223.00    254.67    -31.67   35985.59
 12     1   1979  223.00    254.89    -31.89   36017.48
            INTEREST FOR YEAR   9045.62
  1     1   1980  223.00    255.12    -32.12   36049.60
  2     1   1980  223.00    255.35    -32.35   36081.94
  3     1   1980  223.00    255.58    -32.58   36114.52
  4     1   1980  223.00    255.81    -32.81   36147.32
  5     1   1980  223.00    256.04    -33.04   36180.36
  6     1   1980  223.00    256.27    -33.27   36213.64
  7     1   1980  223.00    256.51    -33.51   36247.14
```

8	1	1980	223.00	256.75	-33.75	36280.89
9	1	1980	223.00	256.98	-33.98	36314.88
10	1	1980	223.00	257.23	-34.23	36349.10
11	1	1980	223.00	257.47	-34.47	36383.57
12	1	1980	223.00	257.71	-34.71	36418.28
		INTEREST FOR YEAR 12122.47				
1	1	1981	223.00	257.96	-34.96	36453.25
2	1	1981	223.00	258.21	-35.21	36488.45
3	1	1981	223.00	258.45	-35.45	36523.90
4	1	1981	223.00	258.71	-35.71	36559.60
5	1	1981	223.00	258.96	-35.96	36595.57
6	1	1981	223.00	259.21	-36.21	36631.78
7	1	1981	223.00	259.47	-36.47	36668.25
8	1	1981	223.00	259.73	-36.73	36704.97
9	1	1981	223.00	259.99	-36.99	36741.96
10	1	1981	223.00	260.25	-37.25	36779.21
11	1	1981	223.00	260.51	-37.51	36816.73
12	1	1981	223.00	260.78	-37.78	36854.51
		INTEREST FOR YEAR 15234.75				
1	1	1982	229.69	261.05	-31.36	36885.87
2	1	1982	229.69	261.27	-31.58	36917.45
3	1	1982	229.69	261.49	-31.80	36949.25
4	1	1982	229.69	261.72	-32.03	36981.28
5	1	1982	229.69	261.95	-32.26	37013.54
6	1	1982	229.69	262.17	-32.48	37046.03
7	1	1982	229.69	262.40	-32.71	37078.75
8	1	1982	229.69	262.64	-32.95	37111.69
9	1	1982	229.69	262.87	-33.18	37144.87
10	1	1982	229.69	263.10	-33.41	37178.28
11	1	1982	229.69	263.34	-33.65	37211.93
12	1	1982	229.69	263.58	-33.89	37245.82
		INTEREST FOR YEAR 18382.37				
1	1	1983	236.58	263.82	-27.24	37273.07
2	1	1983	236.58	264.01	-27.43	37300.50
3	1	1983	236.58	264.21	-27.63	37328.12
4	1	1983	236.58	264.40	-27.82	37355.94
5	1	1983	236.58	264.60	-28.02	37383.96
6	1	1983	236.58	264.80	-28.22	37412.18
7	1	1983	236.58	265.00	-28.42	37440.60
8	1	1983	236.58	265.20	-28.62	37469.22
9	1	1983	236.58	265.40	-28.82	37498.04
10	1	1983	236.58	265.61	-29.03	37527.07
11	1	1983	236.58	265.81	-29.23	37556.30
12	1	1983	236.58	266.02	-29.44	37585.74
		INTEREST FOR YEAR 21561.29				
1	1	1984	243.67	266.23	-22.55	37608.28
2	1	1984	243.67	266.39	-22.71	37631.00
3	1	1984	243.67	266.55	-22.87	37653.86
4	1	1984	243.67	266.71	-23.03	37676.89

5	1	1984	243.67	266.87	-23.19	37700.09
6	1	1984	243.67	267.04	-23.36	37723.45
7	1	1984	243.67	267.20	-23.52	37746.97
8	1	1984	243.67	267.37	-23.69	37770.67
9	1	1984	243.67	267.54	-23.86	37794.53
10	1	1984	243.67	267.71	-24.03	37818.56
11	1	1984	243.67	267.88	-24.20	37842.76
12	1	1984	243.67	268.05	-24.37	37867.13

INTEREST FOR YEAR 24766.84

1	1	1985	250.98	268.22	-17.23	37884.36
2	1	1985	250.98	268.34	-17.35	37901.71
3	1	1985	250.98	268.47	-17.48	37919.19
4	1	1985	250.98	268.59	-17.60	37936.79
5	1	1985	250.98	268.71	-17.73	37954.52
6	1	1985	250.98	268.84	-17.85	37972.37
7	1	1985	250.98	268.97	-17.98	37990.35
8	1	1985	250.98	269.09	-18.10	38008.46
9	1	1985	250.98	269.22	-18.23	38026.69
10	1	1985	250.98	269.35	-18.36	38045.06
11	1	1985	250.98	269.48	-18.49	38063.55
12	1	1985	250.98	269.61	-18.62	38082.17

INTEREST FOR YEAR 27993.78

1	1	1986	258.51	269.74	-11.23	38093.40
2	1	1986	258.51	269.82	-11.31	38104.71
3	1	1986	258.51	269.90	-11.39	38116.09
4	1	1986	258.51	269.98	-11.47	38127.56
5	1	1986	258.51	270.07	-11.55	38139.10
6	1	1986	258.51	270.15	-11.63	38150.74
7	1	1986	258.51	270.23	-11.71	38162.45
8	1	1986	258.51	270.31	-11.79	38174.25

9	1	1986	258.51	270.40	-11.88	38186.13
10	1	1986	258.51	270.48	-11.96	38198.09
11	1	1986	258.51	270.56	-12.05	38210.14
12	1	1986	258.51	270.65	-12.13	38222.27

INTEREST FOR YEAR 31236.11

1	1	1987	266.27	270.74	-4.46	38226.73
2	1	1987	266.27	270.77	-4.49	38231.22
3	1	1987	266.27	270.80	-4.53	38235.75
4	1	1987	266.27	270.83	-4.56	38240.31
5	1	1987	266.27	270.86	-4.59	38244.90
6	1	1987	266.27	270.90	-4.62	38249.53
7	1	1987	266.27	270.93	-4.66	38254.18
8	1	1987	266.27	270.96	-4.69	38258.87
9	1	1987	266.27	271.00	-4.72	38263.60
10	1	1987	266.27	271.03	-4.76	38268.35
11	1	1987	266.27	271.06	-4.79	38273.14
12	1	1987	266.27	271.10	-4.82	38277.96

INTEREST FOR YEAR 34487.10

1	1	1988	274.26	271.13	3.12	38274.83
2	1	1988	274.26	271.11	3.14	38271.68
3	1	1988	274.26	271.09	3.17	38268.51
4	1	1988	274.26	271.06	3.19	38265.32
5	1	1988	274.26	271.04	3.21	38262.10
6	1	1988	274.26	271.02	3.23	38258.85
7	1	1988	274.26	271.00	3.26	38255.59
8	1	1988	274.26	270.97	3.28	38252.30
9	1	1988	274.26	270.95	3.30	38248.99
10	1	1988	274.26	270.93	3.33	38245.65
11	1	1988	274.26	270.90	3.35	38242.29
12	1	1988	274.26	270.88	3.37	38238.91

INTEREST FOR YEAR 37739.19

1	1	1989	282.48	270.85	11.63	38227.28
2	1	1989	282.48	270.77	11.71	38215.56
3	1	1989	282.48	270.69	11.79	38203.76
4	1	1989	282.48	270.60	11.87	38191.88

5	1	1989	282.48	270.52	11.96	38179.91
6	1	1989	282.48	270.44	12.04	38167.85
7	1	1989	282.48	270.35	12.13	38155.71
8	1	1989	282.48	270.26	12.21	38143.49
9	1	1989	282.48	270.18	12.30	38131.17
10	1	1989	282.48	270.09	12.39	38118.78
11	1	1989	282.48	270.00	12.48	38106.29
12	1	1989	282.48	269.91	12.57	38093.72
		INTEREST FOR YEAR 40983.89				
1	1	1990	290.96	269.83	21.13	38072.58
2	1	1990	290.96	269.68	21.28	38051.29
3	1	1990	290.96	269.52	21.43	38029.85
4	1	1990	290.96	269.37	21.58	38008.26
5	1	1990	290.96	269.22	21.73	37986.52
6	1	1990	290.96	269.07	21.89	37964.62
7	1	1990	290.96	268.91	22.04	37942.57
8	1	1990	290.96	268.75	22.20	37920.35
9	1	1990	290.96	268.60	22.36	37897.99
10	1	1990	290.96	268.44	22.52	37875.46
11	1	1990	290.96	268.28	22.67	37852.78
12	1	1990	290.96	268.12	22.84	37829.93
		INTEREST FOR YEAR 44211.69				
1	1	1991	299.69	267.96	31.73	37798.20
2	1	1991	299.69	267.73	31.95	37766.24
3	1	1991	299.69	267.51	32.18	37734.05
4	1	1991	299.69	267.28	32.41	37701.64
5	1	1991	299.69	267.05	32.63	37669.00
6	1	1991	299.69	266.82	32.87	37636.12
7	1	1991	299.69	266.58	33.10	37603.01
8	1	1991	299.69	266.35	33.33	37569.67
9	1	1991	299.69	266.11	33.57	37536.09
10	1	1991	299.69	265.88	33.81	37502.28
11	1	1991	299.69	265.64	34.05	37468.22
12	1	1991	299.69	265.39	34.29	37433.92
		INTEREST FOR YEAR 47412.01				
1	1	1992	308.68	265.15	43.52	37390.39
2	1	1992	308.68	264.84	43.83	37346.56
3	1	1992	308.68	264.53	44.14	37302.41
4	1	1992	308.68	264.22	44.45	37257.95
5	1	1992	308.68	263.91	44.77	37213.17
6	1	1992	308.68	263.59	45.09	37168.08
7	1	1992	308.68	263.27	45.41	37122.67
8	1	1992	308.68	262.95	45.73	37076.93
9	1	1992	308.68	262.62	46.05	37030.87
10	1	1992	308.68	262.30	46.38	36984.49
11	1	1992	308.68	261.97	46.71	36937.78
12	1	1992	308.68	261.64	47.04	36890.73
		INTEREST FOR YEAR 50573.00				

1	1	1993	308.68	261.30	47.37	36843.35
2	1	1993	308.68	260.97	47.71	36795.64
3	1	1993	308.68	260.63	48.04	36747.59
4	1	1993	308.68	260.29	48.38	36699.20
5	1	1993	308.68	259.95	48.73	36650.46
6	1	1993	308.68	259.60	49.07	36601.39
7	1	1993	308.68	259.25	49.42	36551.96
8	1	1993	308.68	258.90	49.77	36502.17
9	1	1993	308.68	258.55	50.12	36452.04
10	1	1993	308.68	258.20	50.48	36401.56
11	1	1993	308.68	257.84	50.83	36350.71
12	1	1993	308.68	257.48	51.19	36299.51
		INTEREST FOR YEAR 53685.98				
1	1	1994	308.68	257.12	51.56	36247.95
2	1	1994	308.68	256.75	51.92	36196.02
3	1	1994	308.68	256.38	52.29	36143.72
4	1	1994	308.68	256.01	52.66	36091.05
5	1	1994	308.68	255.64	53.03	36038.01
6	1	1994	308.68	255.26	53.41	35984.59
7	1	1994	308.68	254.89	53.79	35930.79
8	1	1994	308.68	254.50	54.17	35876.61
9	1	1994	308.68	254.12	54.55	35822.05
10	1	1994	308.68	253.73	54.94	35767.10
11	1	1994	308.68	253.35	55.33	35711.77
12	1	1994	308.68	252.95	55.72	35656.04
		INTEREST FOR YEAR 56746.71				
1	1	1995	308.68	252.56	56.12	35599.92
2	1	1995	308.68	252.16	56.51	35543.39
3	1	1995	308.68	251.76	56.91	35486.47
4	1	1995	308.68	251.36	57.32	35429.14
5	1	1995	308.68	250.95	57.72	35371.41
6	1	1995	308.68	250.54	58.13	35313.27
7	1	1995	308.68	250.13	58.54	35254.71
8	1	1995	308.68	249.72	58.96	35195.75
9	1	1995	308.68	249.30	59.38	35136.36
10	1	1995	308.68	248.88	59.80	35076.56
11	1	1995	308.68	248.45	60.22	35016.33
12	1	1995	308.68	248.03	60.65	34955.67
		INTEREST FOR YEAR 59750.57				
1	1	1996	308.68	247.60	61.08	34894.59
2	1	1996	308.68	247.16	61.51	34833.07
3	1	1996	308.68	246.73	61.94	34771.12
4	1	1996	308.68	246.29	62.38	34708.73
5	1	1996	308.68	245.85	62.83	34645.89
6	1	1996	308.68	245.40	63.27	34582.61
7	1	1996	308.68	244.96	63.72	34518.89
8	1	1996	308.68	244.50	64.17	34454.71
9	1	1996	308.68	244.05	64.62	34390.07
10	1	1996	308.68	243.59	65.08	34324.98
11	1	1996	308.68	243.13	65.54	34259.42
12	1	1996	308.68	242.67	66.01	34193.41
		INTEREST FOR YEAR 62692.50				
1	1	1997	308.68	242.20	66.48	34126.92
2	1	1997	308.68	241.73	66.95	34059.97
3	1	1997	308.68	241.25	67.42	33992.54
4	1	1997	308.68	240.78	67.90	33924.64
5	1	1997	308.68	240.29	68.38	33856.25
6	1	1997	308.68	239.81	68.86	33787.37
7	1	1997	308.68	239.32	69.35	33718.01
8	1	1997	308.68	238.83	69.84	33648.16
9	1	1997	308.68	238.34	70.34	33577.82

10	1	1997	308.68	237.84	70.84	33506.97
11	1	1997	308.68	237.34	71.34	33435.63
12	1	1997	308.68	236.83	71.84	33363.78
		INTEREST FOR YEAR 65567.06				
1	1	1998	308.68	236.32	72.35	33291.42
2	1	1998	308.68	235.81	72.86	33218.54
3	1	1998	308.68	235.29	73.38	33145.15
4	1	1998	308.68	234.77	73.90	33071.25
5	1	1998	308.68	234.25	74.42	32996.82
6	1	1998	308.68	233.72	74.95	32921.85
7	1	1998	308.68	233.19	75.48	32846.36
8	1	1998	308.68	232.66	76.02	32770.34
9	1	1998	308.68	232.12	76.56	32693.77
10	1	1998	308.68	231.58	77.10	32616.67
11	1	1998	308.68	231.03	77.64	32539.01
12	1	1998	308.68	230.48	78.19	32460.82
		INTEREST FOR YEAR 68368.26				
1	1	1999	308.68	229.93	78.75	32382.06
2	1	1999	308.68	229.37	79.31	32302.75
3	1	1999	308.68	228.81	79.87	32222.87
4	1	1999	308.68	228.24	80.43	32142.43
5	1	1999	308.68	227.67	81.00	32061.42
6	1	1999	308.68	227.10	81.58	31979.83
7	1	1999	308.68	226.52	82.16	31897.67
8	1	1999	308.68	225.94	82.74	31814.93
9	1	1999	308.68	225.35	83.32	31731.60
10	1	1999	308.68	224.76	83.91	31647.68
11	1	1999	308.68	224.17	84.51	31563.17
12	1	1999	308.68	223.57	85.11	31478.05
		INTEREST FOR YEAR 71089.60				
1	1	2000	308.68	222.96	85.71	31392.34
2	1	2000	308.68	222.36	86.32	31306.01
3	1	2000	308.68	221.75	86.93	31219.08
4	1	2000	308.68	221.13	87.54	31131.53
5	1	2000	308.68	220.51	88.16	31043.36
6	1	2000	308.68	219.89	88.79	30954.56
7	1	2000	308.68	219.26	89.42	30865.14
8	1	2000	308.68	218.62	90.05	30775.08
9	1	2000	308.68	217.99	90.69	30684.38
10	1	2000	308.68	217.34	91.33	30593.04
11	1	2000	308.68	216.70	91.98	30501.06
12	1	2000	308.68	216.04	92.63	30408.42
		INTEREST FOR YEAR 73724.12				
1	1	2001	308.68	215.39	93.29	30315.13
2	1	2001	308.68	214.73	93.95	30221.17
3	1	2001	308.68	214.06	94.61	30126.55
4	1	2001	308.68	213.39	95.28	30031.26
5	1	2001	308.68	212.72	95.96	29935.30
6	1	2001	308.68	212.04	96.64	29838.66
7	1	2001	308.68	211.35	97.32	29741.33
8	1	2001	308.68	210.66	98.01	29643.31
9	1	2001	308.68	209.97	98.71	29544.60
10	1	2001	308.68	209.27	99.40	29445.19
11	1	2001	308.68	208.57	100.11	29345.07
12	1	2001	308.68	207.86	100.82	29244.25
		INTEREST FOR YEAR 76264.09				
1	1	2002	308.68	207.14	101.53	29142.71
2	1	2002	308.68	206.42	102.25	29040.45
3	1	2002	308.68	205.70	102.98	28937.46
4	1	2002	308.68	204.97	103.71	28833.75
5	1	2002	308.68	204.23	104.44	28729.31

6	1	2002	308.68	203.49	105.18	28624.12
7	1	2002	308.68	202.75	105.92	28518.19
8	1	2002	308.68	202.00	106.68	28411.51
9	1	2002	308.68	201.24	107.43	28304.07
10	1	2002	308.68	200.48	108.19	28195.87
11	1	2002	308.68	199.72	108.96	28086.91
12	1	2002	308.68	198.94	109.73	27977.17
		INTEREST FOR YEAR 78701.17				
1	1	2003	308.68	198.17	110.51	27866.65
2	1	2003	308.68	197.38	111.29	27755.35
3	1	2003	308.68	196.60	112.08	27643.27
4	1	2003	308.68	195.80	112.87	27530.39
5	1	2003	308.68	195.00	113.67	27416.71
6	1	2003	308.68	194.20	114.48	27302.23
7	1	2003	308.68	193.39	115.29	27186.93
8	1	2003	308.68	192.57	116.10	27070.82
9	1	2003	308.68	191.75	116.93	26953.88
10	1	2003	308.68	190.92	117.76	26836.12
11	1	2003	308.68	190.08	118.59	26717.52
12	1	2003	308.68	189.24	119.43	26598.08
		INTEREST FOR YEAR 81026.21				
1	1	2004	308.68	188.40	120.28	26477.80
2	1	2004	308.68	187.55	121.13	26356.67
3	1	2004	308.68	186.69	121.99	26234.68
4	1	2004	308.68	185.82	122.85	26111.82
5	1	2004	308.68	184.95	123.72	25988.10
6	1	2004	308.68	184.08	124.60	25863.50
7	1	2004	308.68	183.19	125.48	25738.01
8	1	2004	308.68	182.31	126.37	25611.64
9	1	2004	308.68	181.41	127.26	25484.37
10	1	2004	308.68	180.51	128.16	25356.19
11	1	2004	308.68	179.60	129.07	25227.12
12	1	2004	308.68	178.69	129.99	25097.12
		INTEREST FOR YEAR 83229.37				
1	1	2005	308.68	177.77	130.91	24966.21
2	1	2005	308.68	176.84	131.83	24834.37
3	1	2005	308.68	175.91	132.77	24701.59
4	1	2005	308.68	174.96	133.71	24567.87
5	1	2005	308.68	174.02	134.66	24433.21
6	1	2005	308.68	173.06	135.61	24297.59
7	1	2005	308.68	172.10	136.57	24161.01
8	1	2005	308.68	171.14	137.54	24023.47
9	1	2005	308.68	170.16	138.51	23884.95
10	1	2005	308.68	169.18	139.49	23745.45
11	1	2005	308.68	168.19	140.48	23604.96
12	1	2005	308.68	167.20	141.48	23463.48
		INTEREST FOR YEAR 85299.85				
1	1	2006	308.68	166.19	142.48	23320.99
2	1	2006	308.68	165.19	143.49	23177.50
3	1	2006	308.68	164.17	144.50	23032.98
4	1	2006	308.68	163.15	145.53	22887.45
5	1	2006	308.68	162.11	146.56	22740.88
6	1	2006	308.68	161.08	147.60	22593.28
7	1	2006	308.68	160.03	148.64	22444.63
8	1	2006	308.68	158.98	149.70	22294.92
9	1	2006	308.68	157.92	150.76	22144.16
10	1	2006	308.68	156.85	151.82	21992.33
11	1	2006	308.68	155.77	152.90	21839.42
12	1	2006	308.68	154.69	153.98	21685.44
		INTEREST FOR YEAR 87225.95				
1	1	2007	308.68	153.60	155.07	21530.35

2	1	2007	308.68	152.50	156.17	21374.17
3	1	2007	308.68	151.40	157.28	21216.89
4	1	2007	308.68	150.28	158.39	21058.49
5	1	2007	308.68	149.16	159.51	20898.97
6	1	2007	308.68	148.03	160.64	20738.32
7	1	2007	308.68	146.89	161.78	20576.53
8	1	2007	308.68	145.75	162.93	20413.60
9	1	2007	308.68	144.59	164.08	20249.51
10	1	2007	308.68	143.43	165.24	20084.26
11	1	2007	308.68	142.26	166.42	19917.83
12	1	2007	308.68	141.08	167.59	19750.23
		INTEREST FOR YEAR 88994.89				
1	1	2008	308.68	139.89	168.78	19581.44
2	1	2008	308.68	138.70	169.98	19411.46
3	1	2008	308.68	137.49	171.18	19240.27
4	1	2008	308.68	136.28	172.39	19067.87
5	1	2008	308.68	135.06	173.61	18894.25
6	1	2008	308.68	133.83	174.84	18719.40
7	1	2008	308.68	132.59	176.08	18543.31
8	1	2008	308.68	131.34	177.33	18365.97
9	1	2008	308.68	130.09	178.59	18187.38
10	1	2008	308.68	128.82	179.85	18007.52
11	1	2008	308.68	127.55	181.13	17826.39
12	1	2008	308.68	126.27	182.41	17643.97
		INTEREST FOR YEAR 90592.76				
1	1	2009	308.68	124.97	183.70	17460.26
2	1	2009	308.68	123.67	185.00	17275.26
3	1	2009	308.68	122.36	186.31	17088.94
4	1	2009	308.68	121.04	187.63	16901.30
5	1	2009	308.68	119.71	188.96	16712.33
6	1	2009	308.68	118.37	190.30	16522.02
7	1	2009	308.68	117.03	191.65	16330.36
8	1	2009	308.68	115.67	193.01	16137.35
9	1	2009	308.68	114.30	194.37	15942.97
10	1	2009	308.68	112.92	195.75	15747.22
11	1	2009	308.68	111.54	197.14	15550.07
12	1	2009	308.68	110.14	198.53	15351.53
		INTEREST FOR YEAR 92004.45				
1	1	2010	308.68	108.74	199.94	15151.59
2	1	2010	308.68	107.32	201.36	14950.23
3	1	2010	308.68	105.89	202.78	14747.44
4	1	2010	308.68	104.46	204.22	14543.22
5	1	2010	308.68	103.01	205.66	14337.55
6	1	2010	308.68	101.55	207.12	14130.42
7	1	2010	308.68	100.09	208.59	13921.83
8	1	2010	308.68	98.61	210.07	13711.75
9	1	2010	308.68	97.12	211.55	13500.19
10	1	2010	308.68	95.62	213.05	13287.13
11	1	2010	308.68	94.11	214.56	13072.57
12	1	2010	308.68	92.59	216.08	12856.48
		INTEREST FOR YEAR 93213.51				
1	1	2011	308.68	91.06	217.61	12638.86
2	1	2011	308.68	89.52	219.15	12419.70
3	1	2011	308.68	87.97	220.71	12198.99
4	1	2011	308.68	86.40	222.27	11976.71
5	1	2011	308.68	84.83	223.84	11752.86
6	1	2011	308.68	83.24	225.43	11527.43
7	1	2011	308.68	81.65	227.03	11300.40
8	1	2011	308.68	80.04	228.63	11071.75
9	1	2011	308.68	78.42	230.25	10841.50

10	1	2011	308.68	76.79	231.88	10609.60
11	1	2011	308.68	75.15	233.53	10376.07
12	1	2011	308.68	73.49	235.18	10140.88

INTEREST FOR YEAR 94202.03

1	1	2012	308.68	71.83	236.85	9904.03
2	1	2012	308.68	70.15	238.53	9665.50
3	1	2012	308.68	68.46	240.21	9425.28
4	1	2012	308.68	66.76	241.92	9183.36
5	1	2012	308.68	65.04	243.63	8939.72
6	1	2012	308.68	63.32	245.36	8694.36
7	1	2012	308.68	61.58	247.09	8447.26
8	1	2012	308.68	59.83	248.84	8198.41
9	1	2012	308.68	58.07	250.61	7947.80
10	1	2012	308.68	56.29	252.38	7695.41
11	1	2012	308.68	54.50	254.17	7441.23
12	1	2012	308.68	52.70	255.97	7185.26

INTEREST FOR YEAR 94950.53

1	1	2013	308.68	50.89	257.78	6927.47
2	1	2013	308.68	49.06	259.61	6667.85
3	1	2013	308.68	47.23	261.45	6406.40
4	1	2013	308.68	45.37	263.30	6143.09
5	1	2013	308.68	43.51	265.17	5877.92
6	1	2013	308.68	41.63	267.04	5610.87
7	1	2013	308.68	39.74	268.94	5341.93
8	1	2013	308.68	37.83	270.84	5071.09
9	1	2013	308.68	35.92	272.76	4798.33
10	1	2013	308.68	33.98	274.69	4523.63
11	1	2013	308.68	32.04	276.64	4246.99
12	1	2013	308.68	30.08	278.60	3968.39

INTEREST FOR YEAR 95437.76

1	1	2014	308.68	28.10	280.57	3687.81
2	1	2014	308.68	26.12	282.56	3405.25
3	1	2014	308.68	24.12	284.56	3120.69
4	1	2014	308.68	22.10	286.57	2834.11
5	1	2014	308.68	20.07	288.60	2545.50
6	1	2014	308.68	18.03	290.65	2254.84
7	1	2014	308.68	15.97	292.71	1962.13
8	1	2014	308.68	13.89	294.78	1667.35
9	1	2014	308.68	11.81	296.87	1370.47
10	1	2014	308.68	9.70	298.97	1071.50
11	1	2014	308.68	7.58	301.09	770.40
12	1	2014	308.68	5.45	303.22	467.18

INTEREST FOR YEAR 95640.65

1	1	2015	308.68	3.30	305.37	161.80
2	1	2015	162.95	1.14	161.80	0.00

INTEREST FOR YEAR 95643.95

NUMBER OF YEARS IS 38.

VITA

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Candidate for the Degree of

Master of Science

Thesis: A COMPARISON OF STANDARD HOME MORTGAGE WITH VARIABLE INTEREST RATE AND DEFERRED PAYMENT MORTGAGES

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